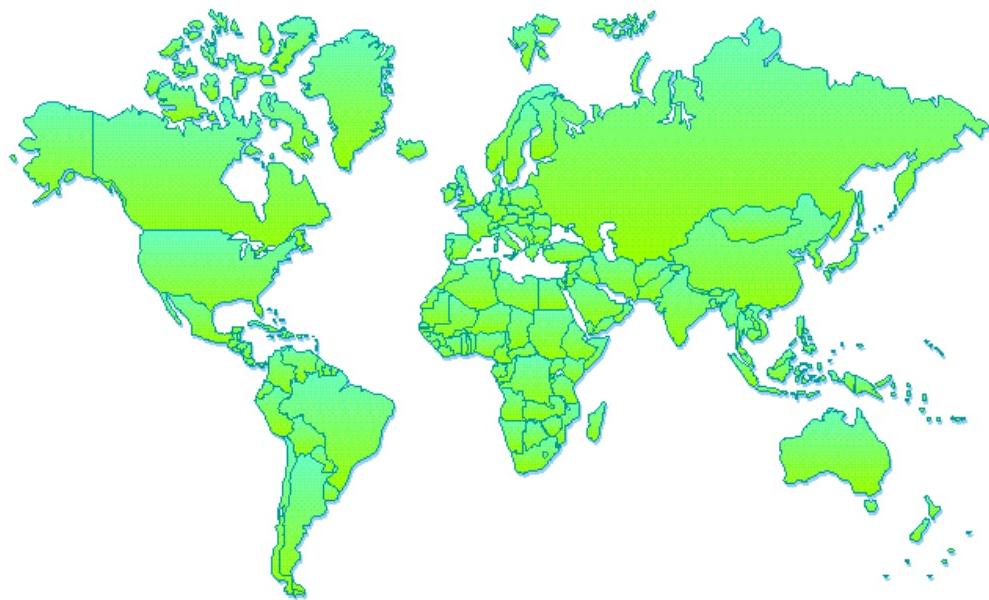


Quality Control System (Q C S)

**User Manual and Training Guide
(Manual for QCS Version 2.33.1.3)**



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Written under contract by Information Systems Support, for the RMS Center,
Los Angeles District, U.S. Army Corps of Engineers

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Chapter 1 - Quality Control System Basics



What Is the QCS Program?

The Quality Control System (QCS) is a user-friendly comprehensive system for the expedient and effective management of construction contracts through tracking and documentation of all facets of a contract being constructed for the U.S. Army Corps of Engineers' construction field offices.

What makes QCS different from previous QC versions?

QCS is a Microsoft Windows® platform utilizing the Interbase® database engine designed with the user in mind. It allows the rapid entry and retrieval of information necessary to efficiently manage your resources. Several key features allow QCS to accomplish these goals. They include:

- Planning for Design, Government and Contractor Resources
- Contract Administration
- Contractor Quality Control Activities
- Libraries that span all database Contracts
- Comprehensive Report Explorer
- Windows features such as:
- Copy, Cut and Paste
- Spell and Grammar Check
- Print and Preview Options

This chapter presents basic information about the QCS program. You will learn:

- How this manual is designed
- What hardware and software you need
- How to install and run the QCS program
- How to view and print reports

Purpose of the QCS Program

The Quality Control System (QCS) is the Contractor's Quality Control module of the Government's Resident Management System (RMS) and was developed to assist contractors in providing contract-required data to the Corps of Engineers. Furthermore, by taking advantage of the monitoring and reporting aspects of this program, the contractor can perform quality control activities more consistently and within the requirements of the Corps of Engineers.

About this Manual

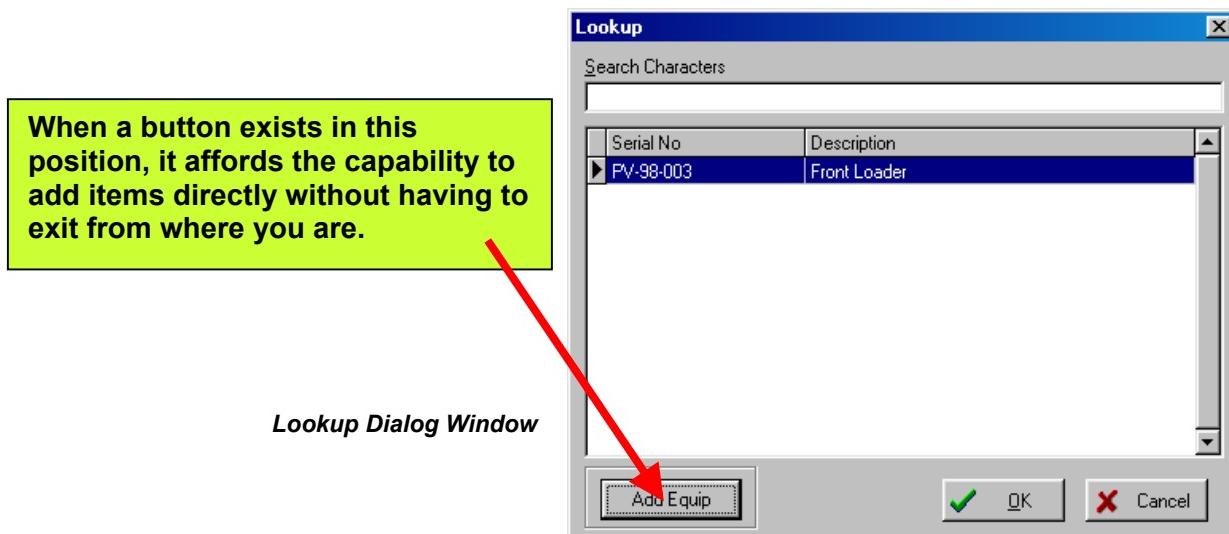
This User Manual and Training Guide are designed to give detailed, easy to understand instructions on how to use the QCS program. It assumes that the user has an understanding of Corps of Engineers' policy and the construction business in general but it does not require any previous computer knowledge.

Typographic Conventions and Symbols

To make it easier for you to use this guide, the same symbols and type styles are used consistently. These are:



Lookup associated with data entered into a cell.





Drop Down Item List associated with required data entered into cell.



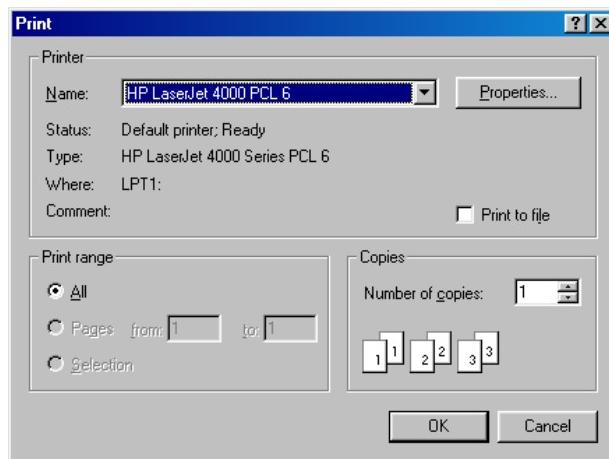
Check Box indicates "yes" or "no" definitive.

Note: The grayed check box with an apparent check showing indicates neither 'Yes' or 'No'.



Print Option

Print Options Window

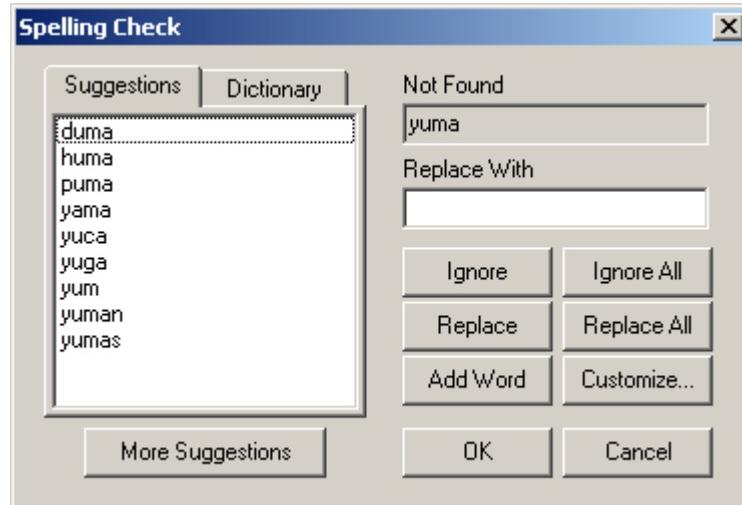


Reports Button to launch Report Screen



Spell Check Button

Spell Check Dialog Window





Add Data



Delete Data



Help

"Help" is not yet completed and is under construction.



FILE	Bold / Upper Case indicates Main Menu Option
Office	Bold / Standard Case indicates Drop Down, Secondary, and any additional Menu Options
Accidents	Bold /Standard Case / Italics indicates a window name.
<i>Forum</i>	Italics indicates cell or field name
[Tab]	Brackets indicate keyboard functions
<i>[Login]</i>	Italicized Brackets indicate window buttons utilized

The Screen Layout of the System

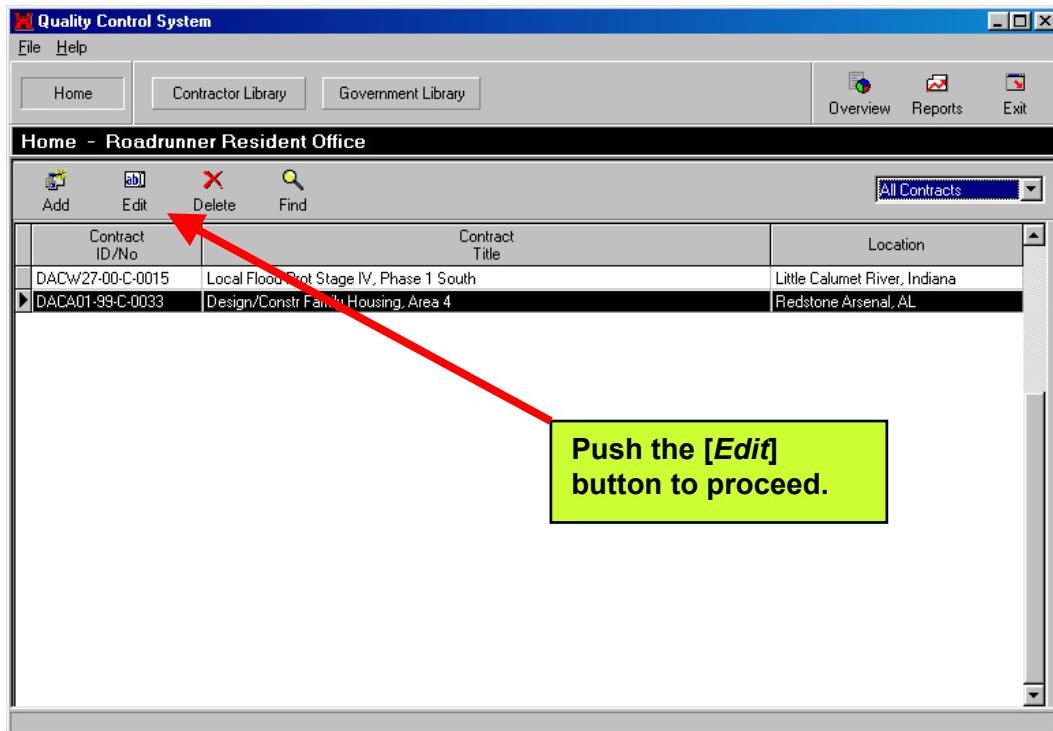
There are quite a number of screens used within the program. However, consistency exists with their appearance and navigation requirements. The QCS opening menu, shown below, is just one example. The menu bar is displayed across the top of a screen and indicates the tasks you can perform from that screen. From this screen you are able to access libraries that affect all contracts within the system. You can also access numerous reports from the **REPORTS** button. The **OVERVIEW** button is not yet available, but is anticipated to provide comprehensive data, views and reports spanning all, or several contracts, with the "top management" in mind.

We are going to assume you have a contract added to your program and begin discussions beginning at that point. In the last chapter of this Manual, we will explain in detail how data is exchanged with the Government, including the ability to add new contracts to the program.

List of Projects

Use your cursor to highlight the contract you want and then press the [*Edit*] button. You can also use [*Find*] if you have more contracts than may be seen on the screen.

There are additional menu bar options on this screen, which we shall discuss at the appropriate point.

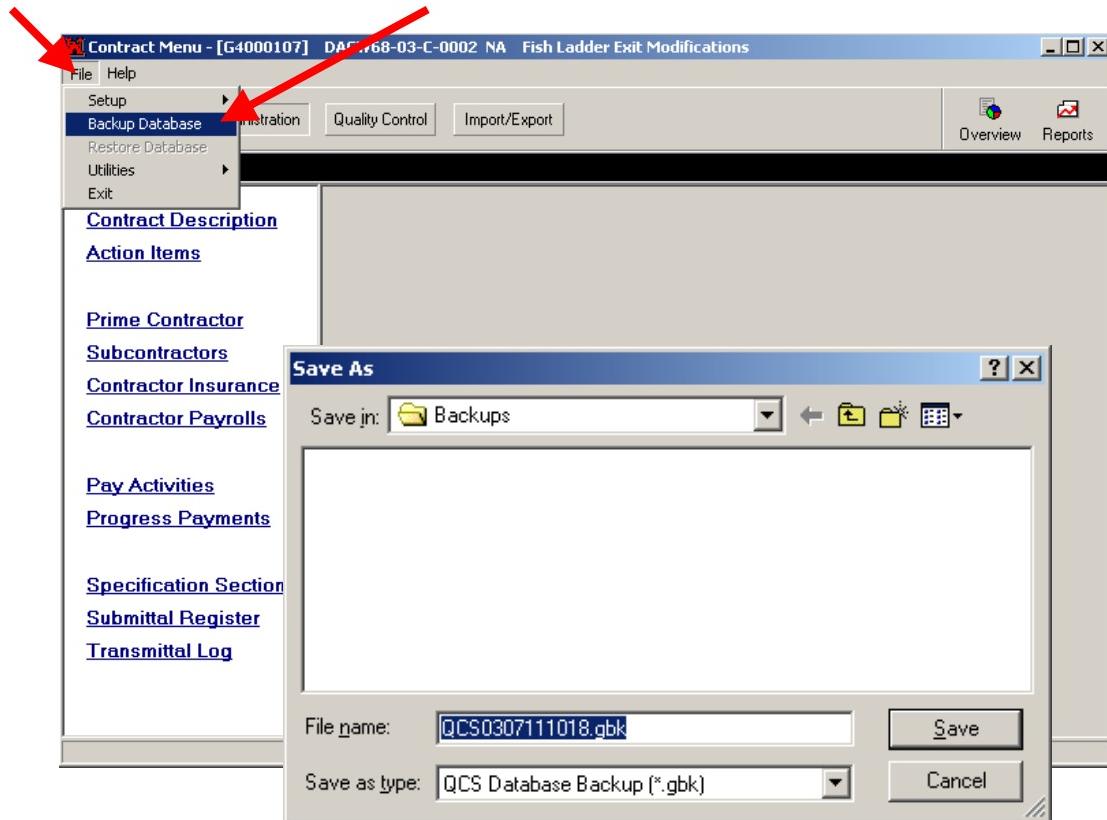


Main (Opening) QCS Screen

NOTE: When you are finished working in the QCS program, you may exit the program by using the **FILE/EXIT** option, or push the "X" in the upper right hand side of each screen. In any case, you will observe a confirmation request that asks if you REALLY want to exit the program. Turning off your computer without exiting properly can damage your files.

Backup Database

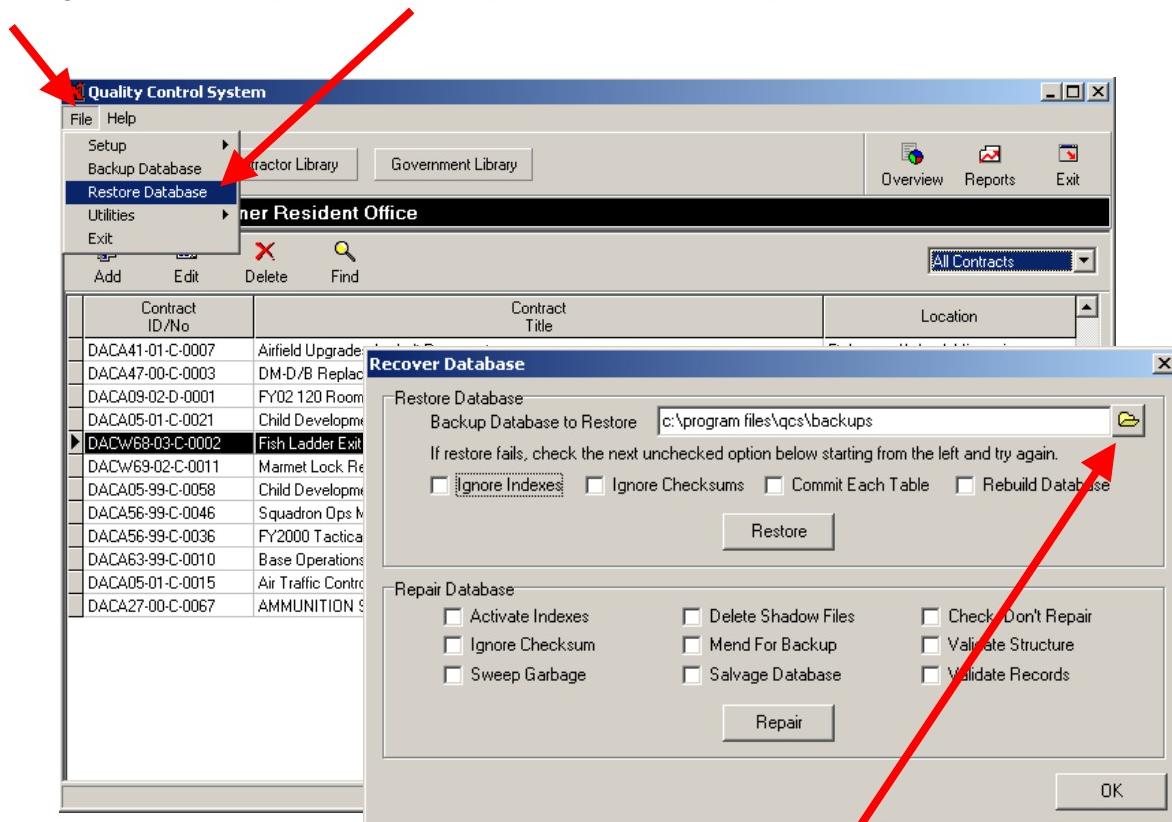
This backup utility allows the User to have multiple backups. Click on **FILE** and scroll to **Backup Database** for access to this feature.



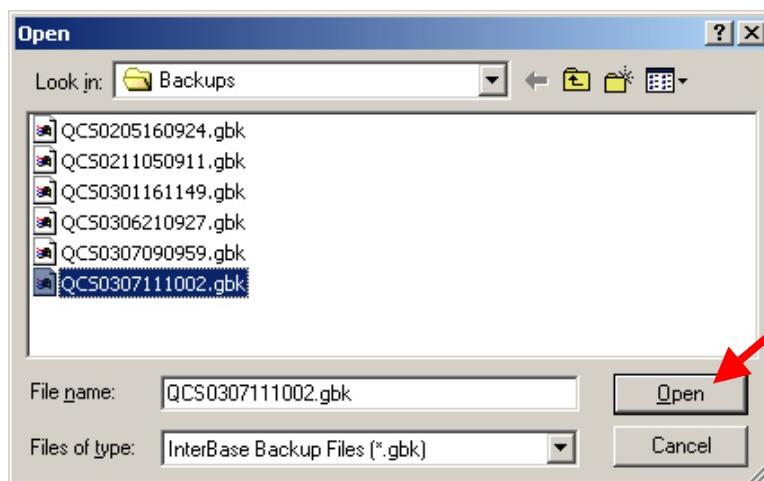
You can use this window to name your backup file. The name defaults to "QCSyyymmddhhmm.gbk" (yy=Year, mm = Month, dd = Day, hh = Hour, mm = Minute). It is recommended that you retain this naming scheme.

Restore Database

This backup utility allows the User to recover a backup from the available files or to repair an existing database. Click on **FILE** and scroll to **Restore Database** for access to this feature.

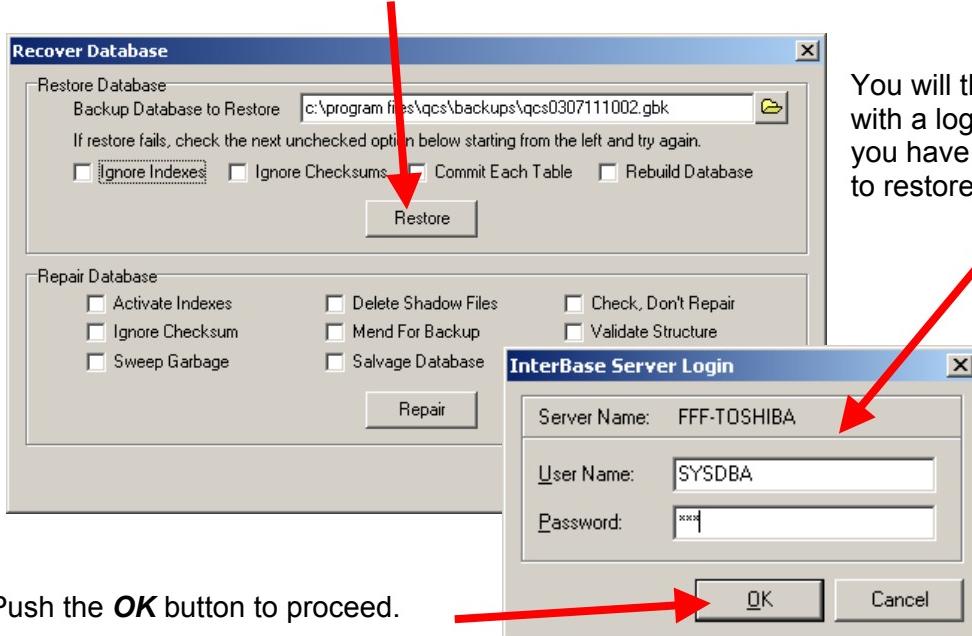


This screen is pretty much self-explanatory. The first thing you will need to do, if you wish to restore a database is to select the one you want to restore. Use the lookup for this purpose and make your selection.

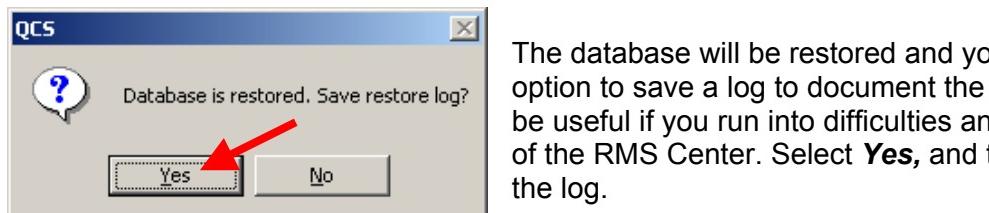


Push **Open** after your selection.

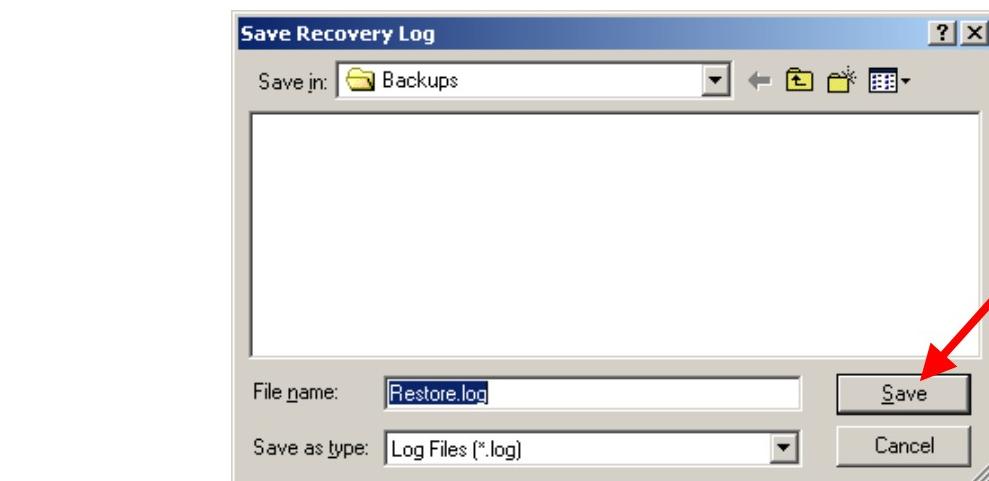
Push the **Restore** button to begin the actual process to restore the contract.



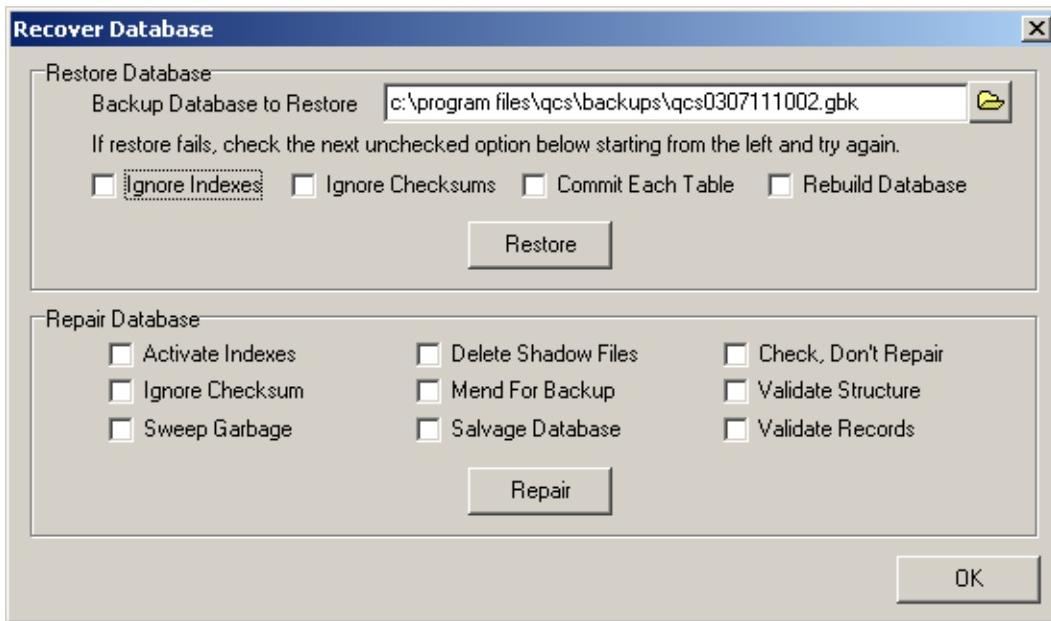
Push the **OK** button to proceed.



The database will be restored and you will then have the option to save a log to document the restore. This log will be useful if you run into difficulties and need the support of the RMS Center. Select **Yes**, and then **Save** to keep the log.



You will then be returned to this screen. If the restore FAILS, read the instructions and try each option. If you continue to have problems, please contact the RMS Center.

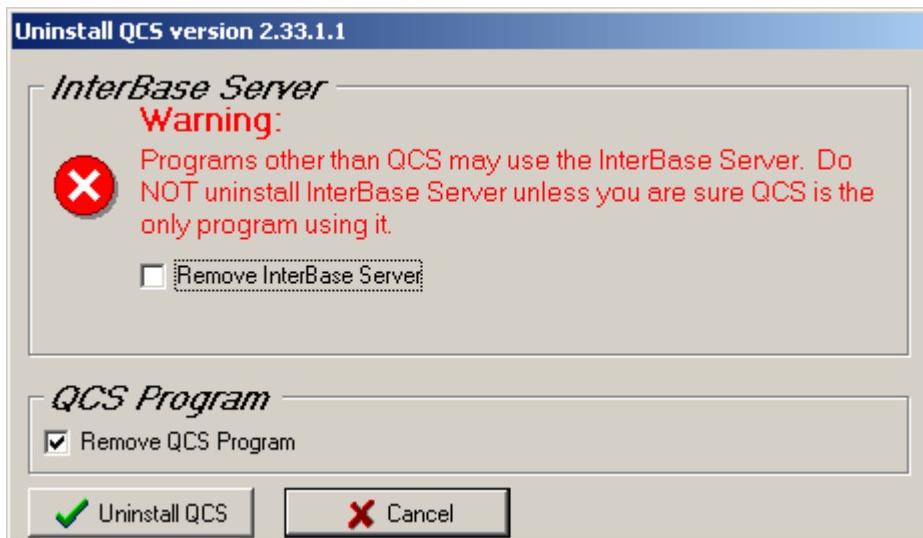
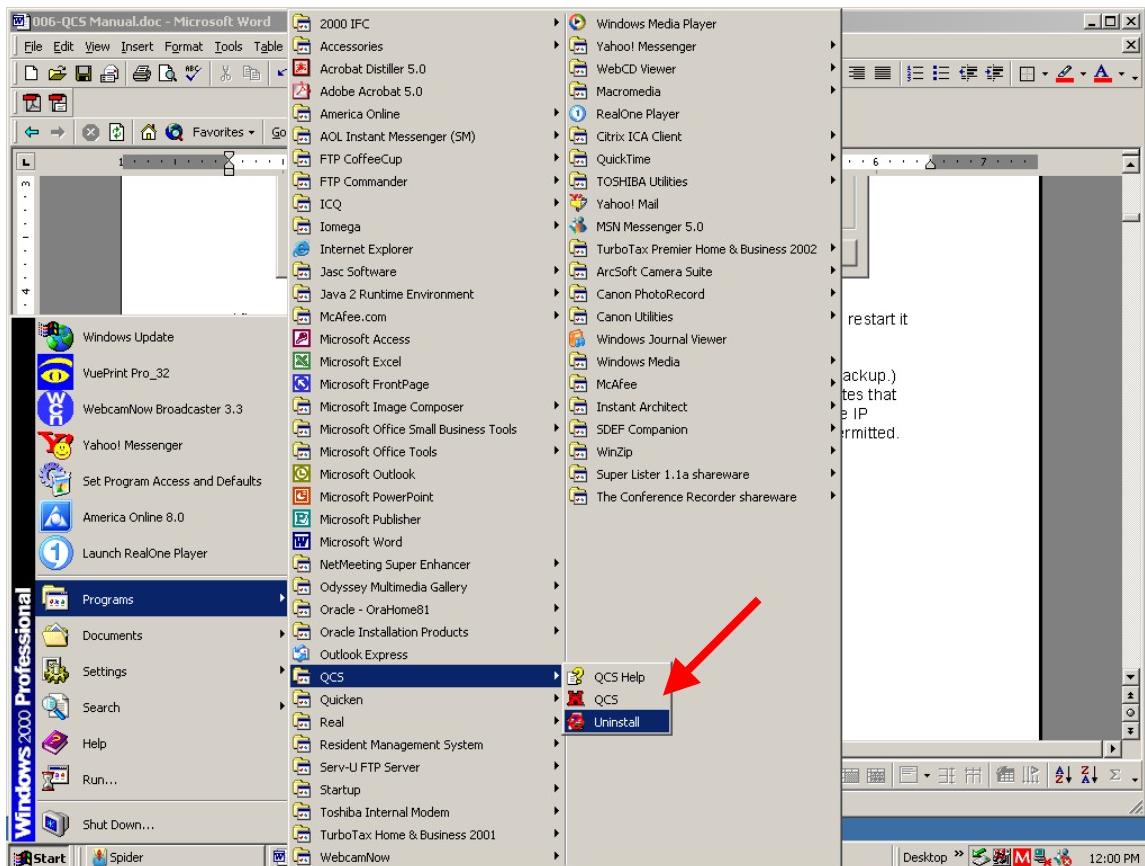


After you restore or repair your database you should exit from the QCS program and restart it for the changes to take effect.

Restore in QCS can only be done from the server itself. (Even clients can trigger a backup.) When a User enters an IP address, instead of a server name, the restore routine states that restores can only be done from the server. The *Server Name* is now compared to the IP address of the machine that is running QCS. If they are the same, Restore is now permitted.

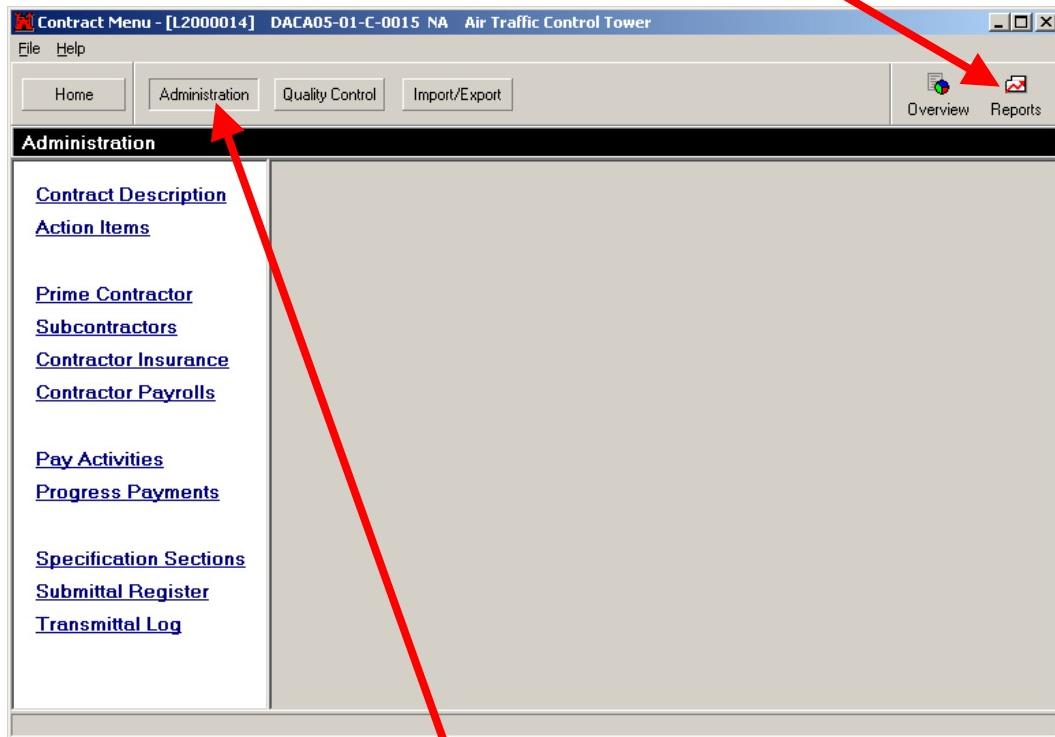
Uninstall the QCS Program

QCS has a fully functional “Uninstall” feature. This uninstall also provides the capability for uninstalling just the InterBase server.



Contract Menu – Administration Screen

The QCS Contract Menu consists of three primary areas: **Administration**, **Quality Control**, and **Import / Export**. All QCS reports may be accessed from this (or any other) screen by clicking on the **REPORTS** button, located at the upper right side of the screen.



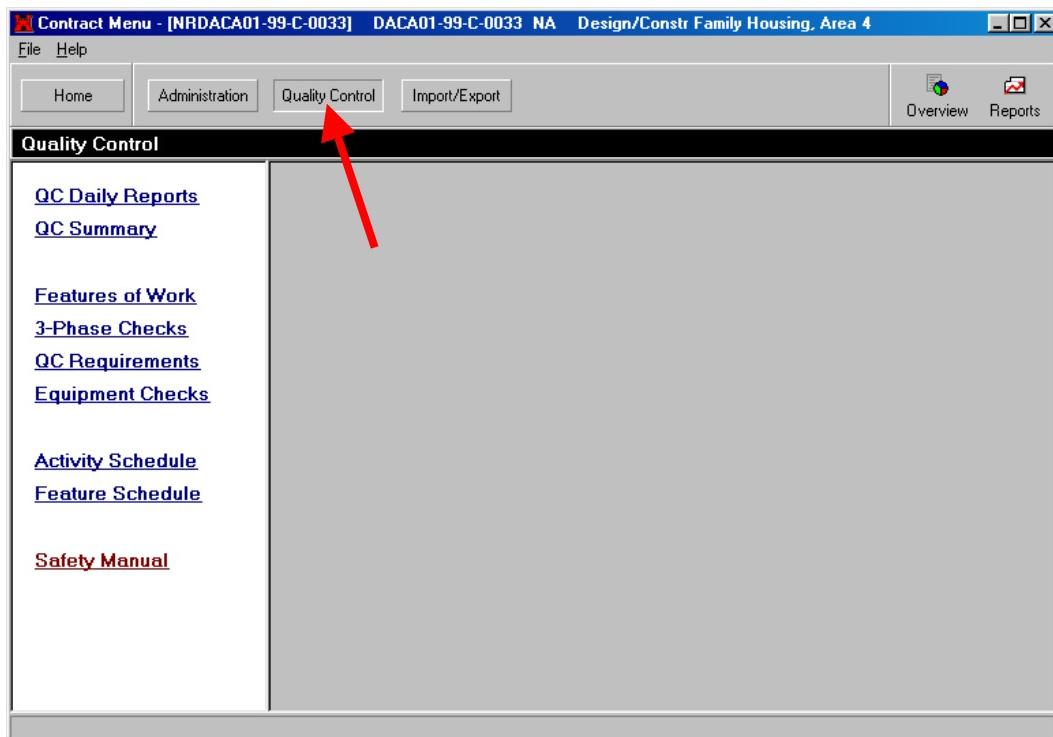
This initial screen defaults to the **ADMINISTRATION** screen and reflects various items that may be viewed, edited or entered, as may be necessary. This screen and the one found under **QUALITY CONTROL** will be where most work is accomplished. Each selection will be discussed in detail.

Contract Menu – Quality Control Screen

The **QUALITY CONTROL** selection presents the area for entering the Daily Quality Control Report (QCR). All reports may also be viewed from this screen by choosing the **SUMMARY** button.

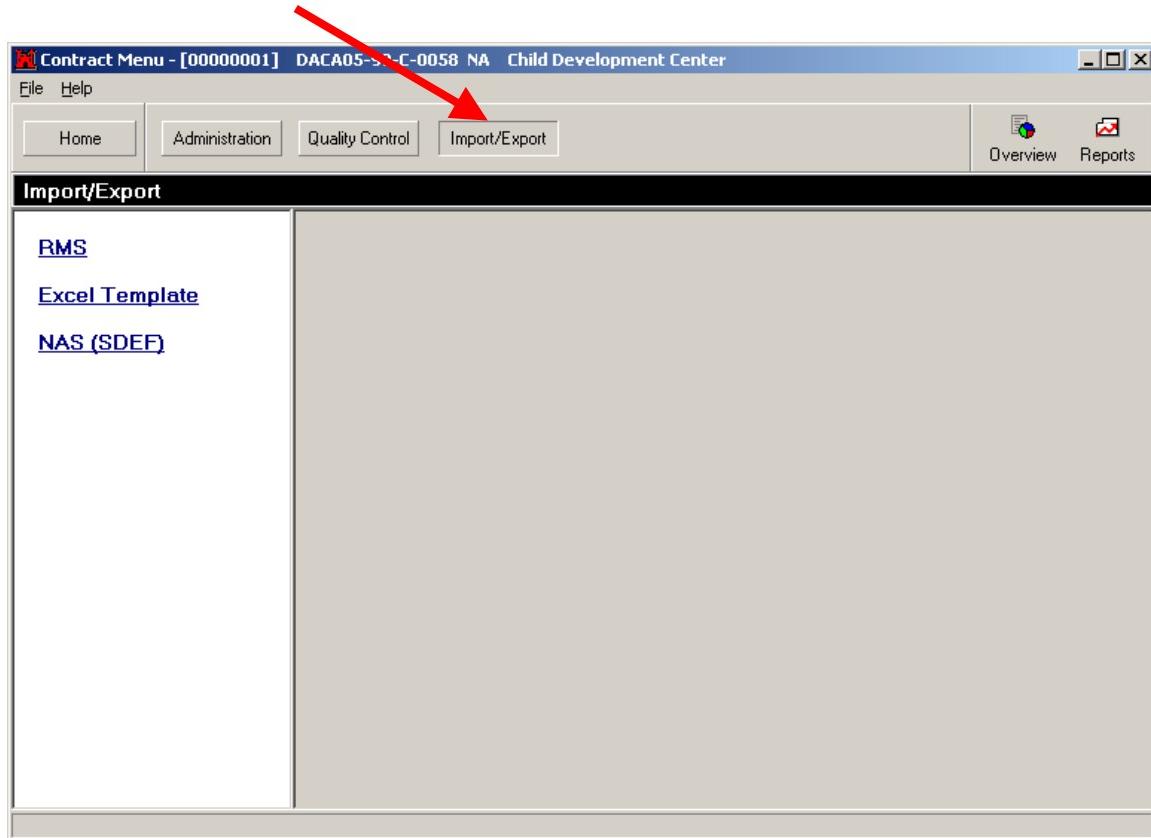
Planning for **Features of Work**, **QC Requirements**, and so forth, are also accomplished from this screen selection.

The red selection, “**Safety Manual**” is not yet available. This is the typical indication of a screen function not yet complete and activated.



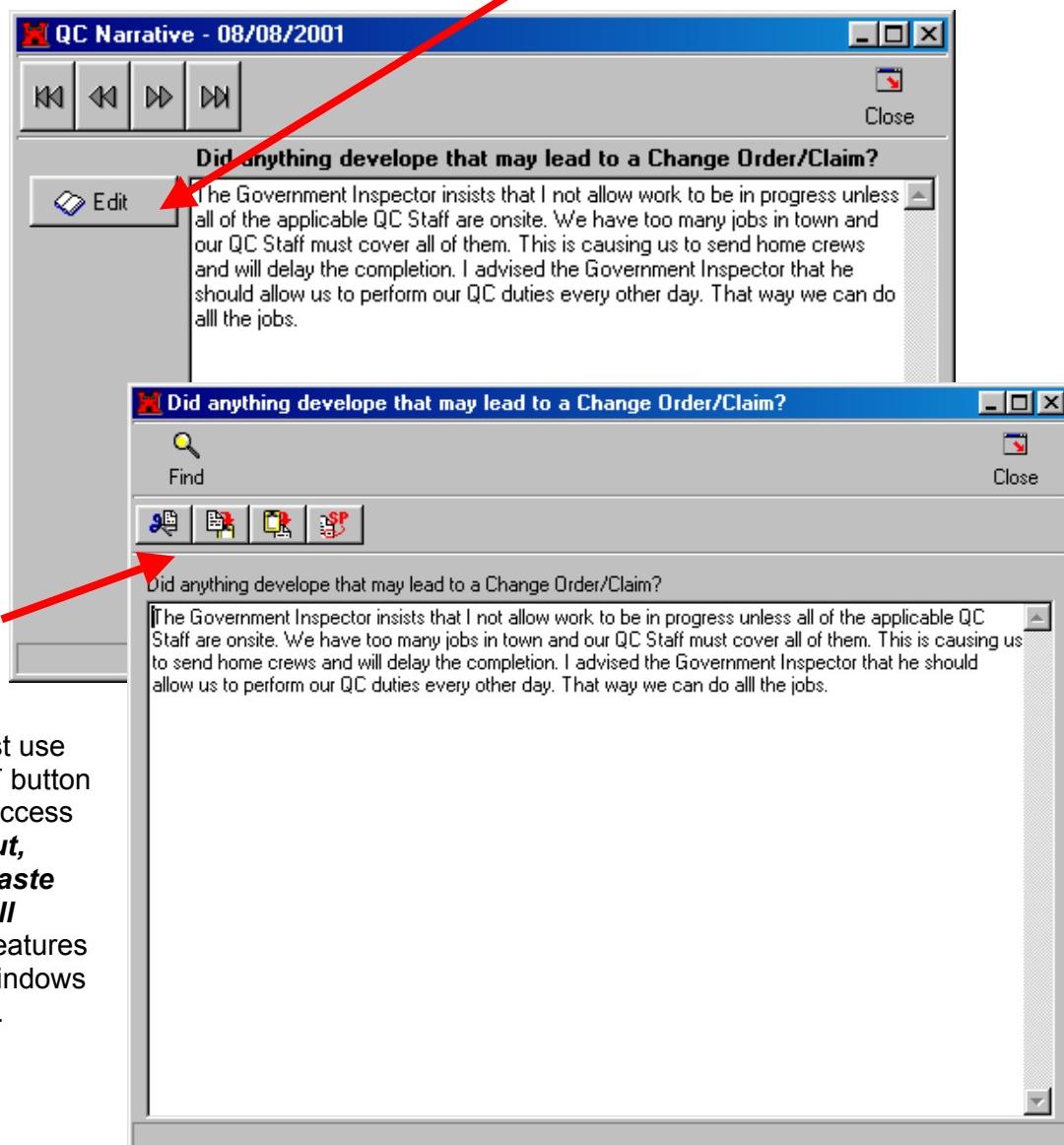
Contract Menu – Import / Export Screen

This is the screen where all exchange of data will take place between the Contractor (QCS Program) and the Government (RMS Program). And, the Contractor will also use this screen to import / export data from the scheduling system (i.e., Primavera) and an Excel spreadsheet for a submittal register.



Edit (Memo) Fields

Edit fields allow unlimited input into a Memo field. An **EDIT** button next to the field indicates them. One example is in QC Narratives, in the following screen. You have an unlimited amount of space to enter comments on a variety of QC topics. Only a certain number of lines display on the screen; however, more of the field can be displayed by pushing the **EDIT** button. This switches the field to full screen mode.



You must use the **EDIT** button to gain access to the **Cut**, **Copy**, **Paste** and **Spell Check** features of the Windows program.

Help Screen

The Help Screen can be used to verify the version of your database and software, and shows where your database is located. This information will be needed if you run into technical difficulties and require assistance from the RMS Center.

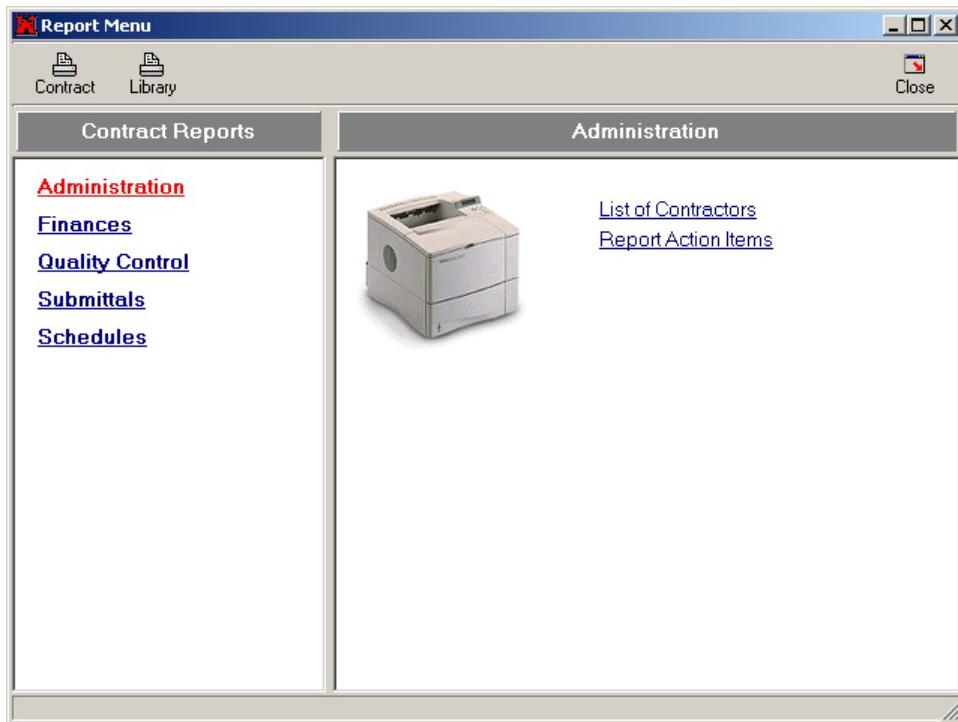


The Reports Option

The **Reports** option can be accessed from any menu or submenu and from most input screens. It has a menu structure similar to the main menu. You can request multiple copies of any report sent to the printer. You can also export reports to an MS Word document or in HTML format.

From any menu, press the **REPORTS** button and you are shown the report topics available. The two print options at the top of the screen show that reports are available from either a contract, or the library. We will discuss the individual reports at the appropriate time.

You will often have the ability to choose various sorts and ranges for the reports and others, such as the report entitled "Contractors", will immediately print to screen to allow preview.



Hardware/Software Requirements

Hardware

- IBM-compatible PC with 500 MHz Pentium or higher processor.
- 128+ MB RAM for workstation / 256+ MB RAM for server.
- 1 GB hard drive disk space for sole use by the QCS system.
- 3-1/2 inch high-density floppy drive.
- Compact Disk (CD) Reader 8x speed or higher.
- SVGA or higher resolution monitor (1024x768, 256 colors).
- Mouse or other pointing device.
- Windows compatible printer. (Laser printer must have 4 MB+ of RAM).
- Connection to the Internet, minimum 56k BPS.

Software

- MS Windows 98, ME, NT, or 2000.
- Word Processing software compatible with MS Word 97 or newer.
- Latest version of: Netscape Navigator, Microsoft Internet Explorer, or other browser that supports HTML 4.0 or higher.
- Electronic mail (E-mail) MAPI compatible.
- Virus protection software that is regularly upgraded with all issued manufacturer's updates.

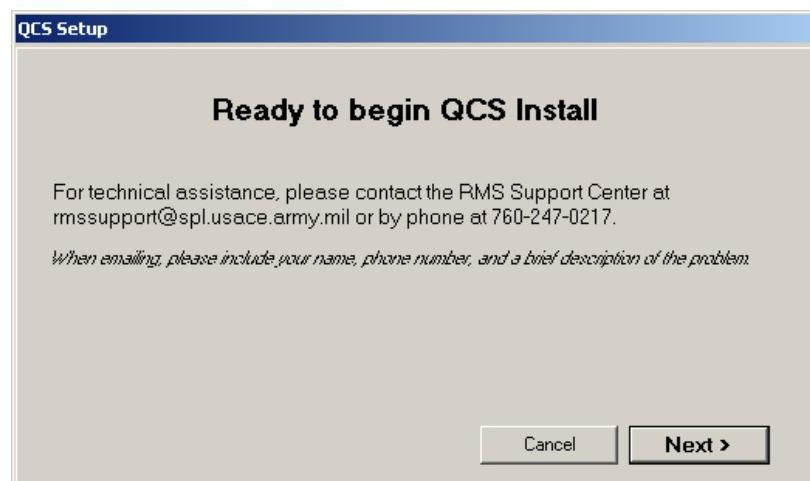
Installing the QCS Program

The **QCSSetup<version>.exe** is the program that you will begin the installation with. Launch the program through your Windows Explorer, the Run command, or however you are used to doing that sort of thing. This is a self-extracting file and will create the necessary files and folders and complete the installation and set up your program. The window will close automatically when the extraction process is completed.

The program should install itself, asking only minimal questions. The program will tailor the installation to suit the computer it is being installed on. That is, the program will install a "new" program if one has not already been installed, it will install an "update" if the program is already installed on the computer and will determine each client or server requirement and automatically install/update what is required. Each screen and instruction is shown on the following pages.

First screen after launching QCSSETUP

You are ready to begin
installing the QCS program.



If you are installing an update,
or reinstalling the program,
QCS will detect it and install
components as needed.

If you are on a *NETWORK*, you will most likely be setting up the program to be used by multiple users, at various locations. In that case, you would typically install the QCS “Client” on each computer workstation and the QCS “Database” on a server. In this example, we will install the program on a “stand-alone” machine. This requires both the CLIENT and the SERVER to be installed.



If you are installing the QCS as a “stand-alone” system (not on a network, but on a single computer station), you must select “Client & Server” to install both the QCS program and the database (Interbase) on that computer.



For the most part, you should accept the default recommendations of the install program.

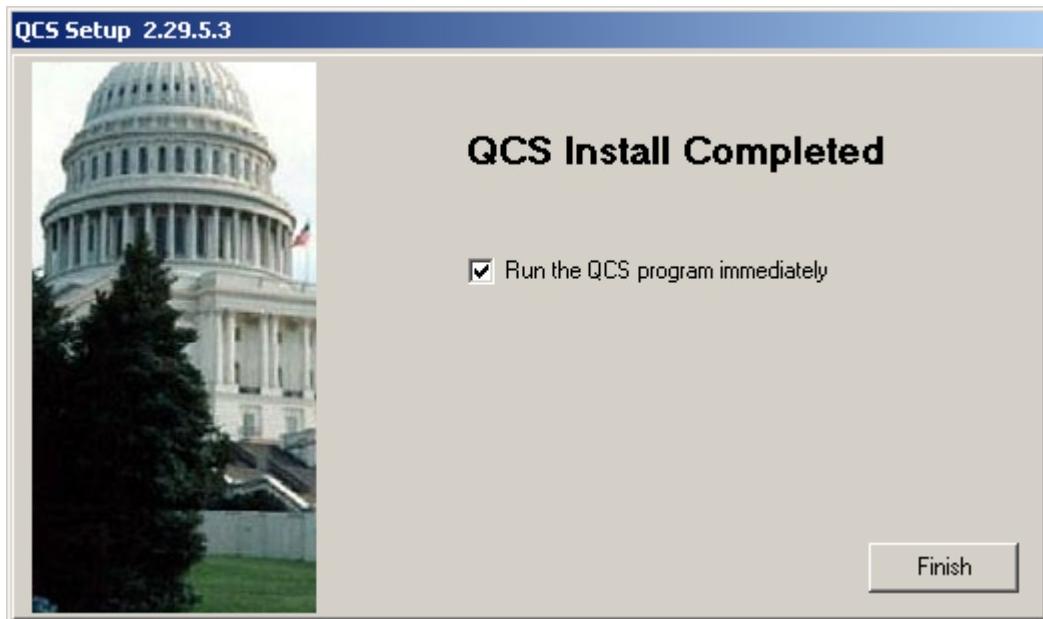
Only the more experienced users should over-ride the defaults as required.

This will install the entire program, client and server on the single, stand-alone, machine.



Accept the default path for the installation and push the **Next** button to complete the setup.

The installation is complete and you are ready to use the QCS program.

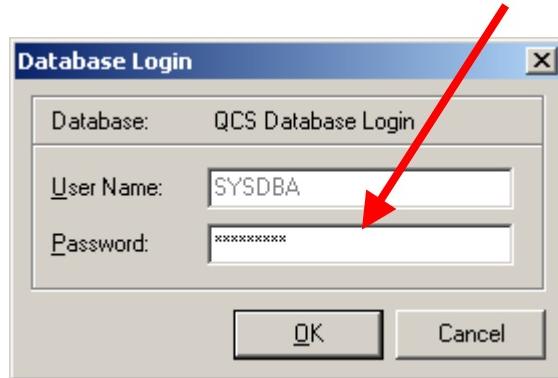


Running the QCS Program

Go to **START / PROGRAMS / QCS** / and select the QCS red-castle icon to start using QCS.

The first time you login, you MUST sign in as **SYSDBA** and use the password "**masterkey**"

The first time you log in you will see this **Opening** screen.



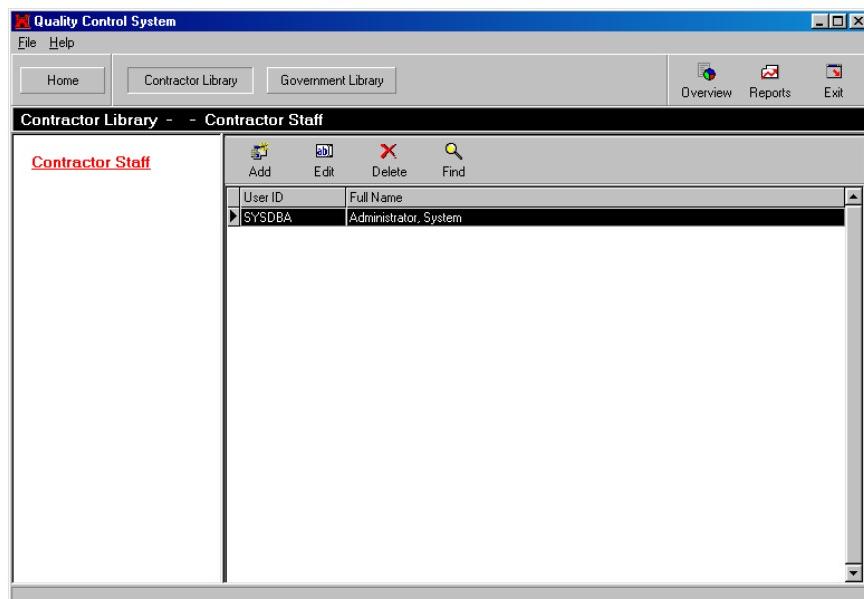
Next, you MUST add one or more STAFF members to the program.

Push the **CONTRACTOR LIBRARY** button on the top menu bar, and select **Contractor Staff**.

Contractor Library – Contractor Staff Screen

The User ID is automatically listed as **SYSDBA**. You need to change the password and add other users that will use the program.

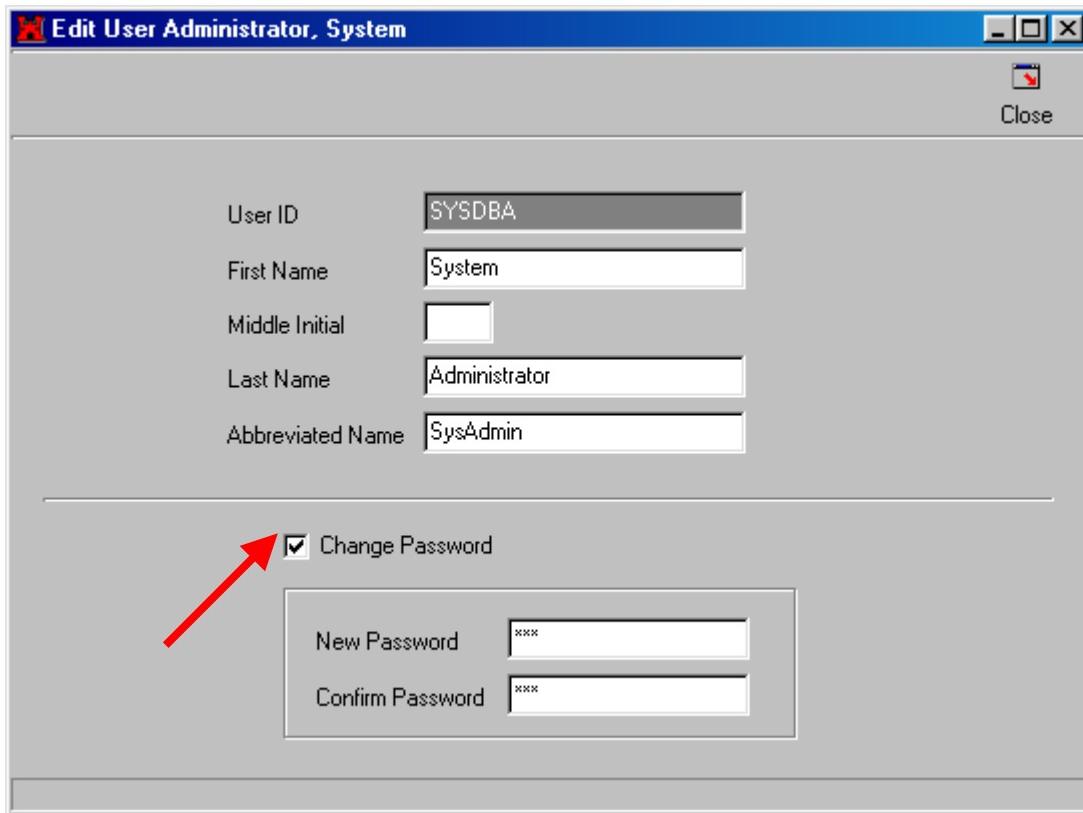
Push the **EDIT** button to change the password. You must first use "**masterkey**" as the default password.



Push **OK** to proceed to the next screen.



Contractor Staff Screen

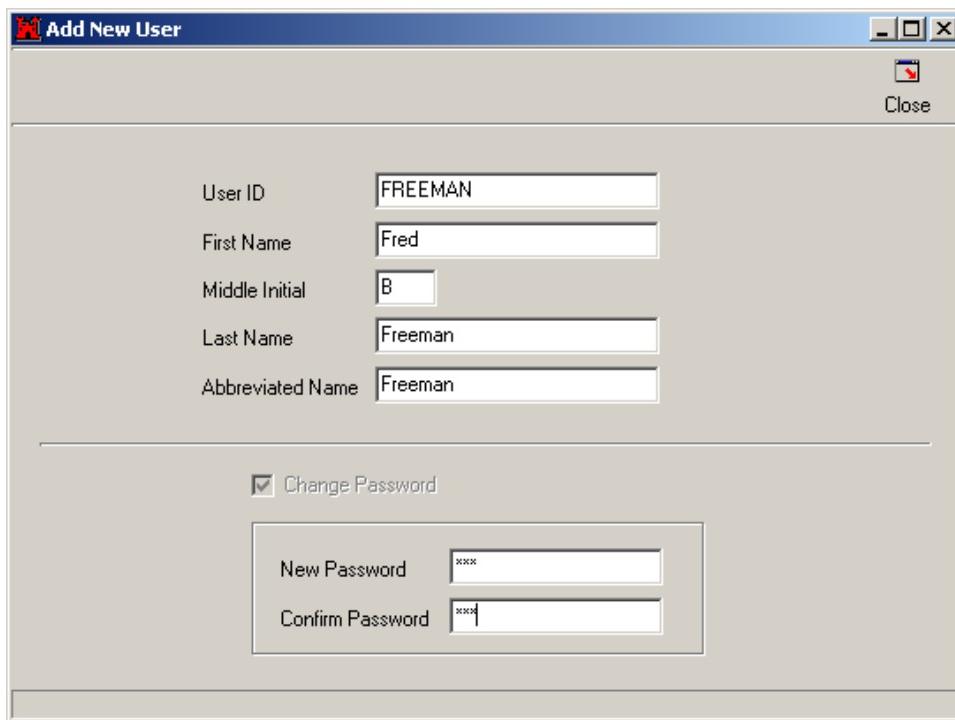


Check the “**Change Password**” box and change to the password to something you will remember.

Push the **CLOSE** button at the top right side of the screen when completed.

Add additional users to the system, by pushing the **ADD** button. **CLOSE** the screen when complete with entries.

Add New User Screen



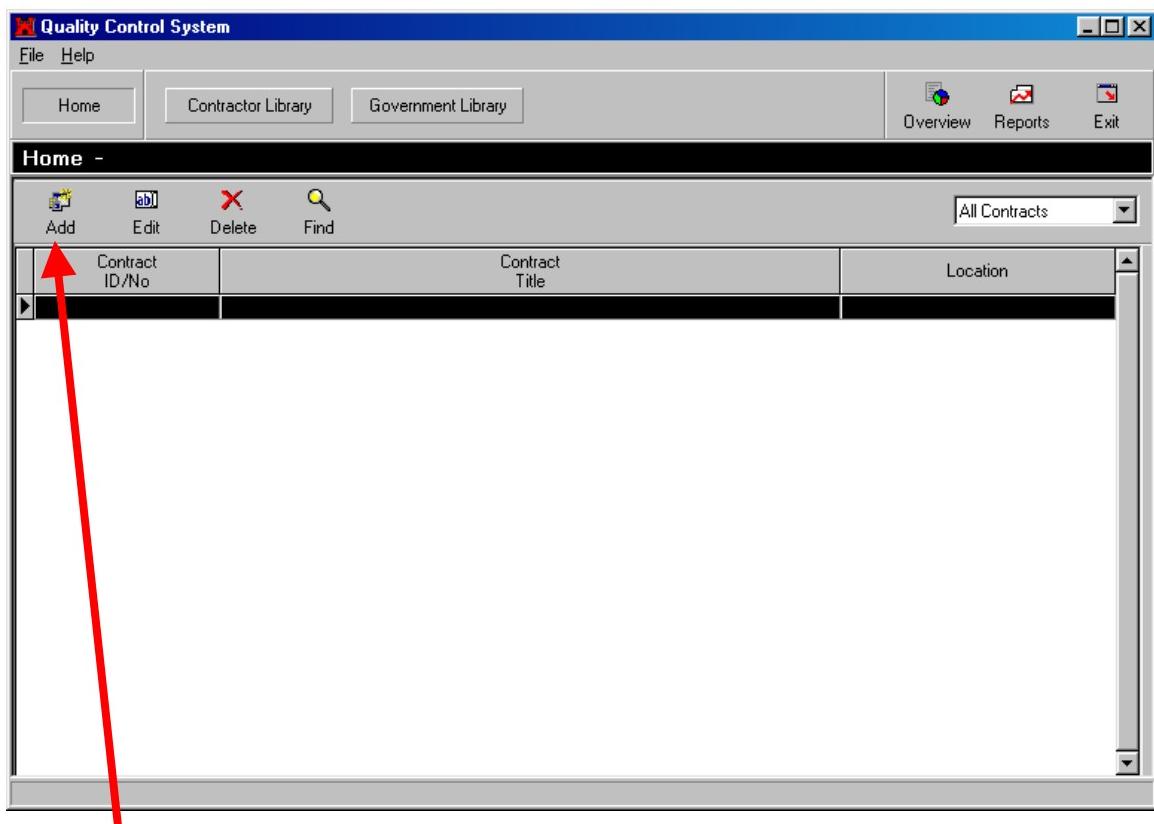
You must then login to the QCS program using your “User ID” and “Password”.

You are now ready to add a contract to the QCS program.

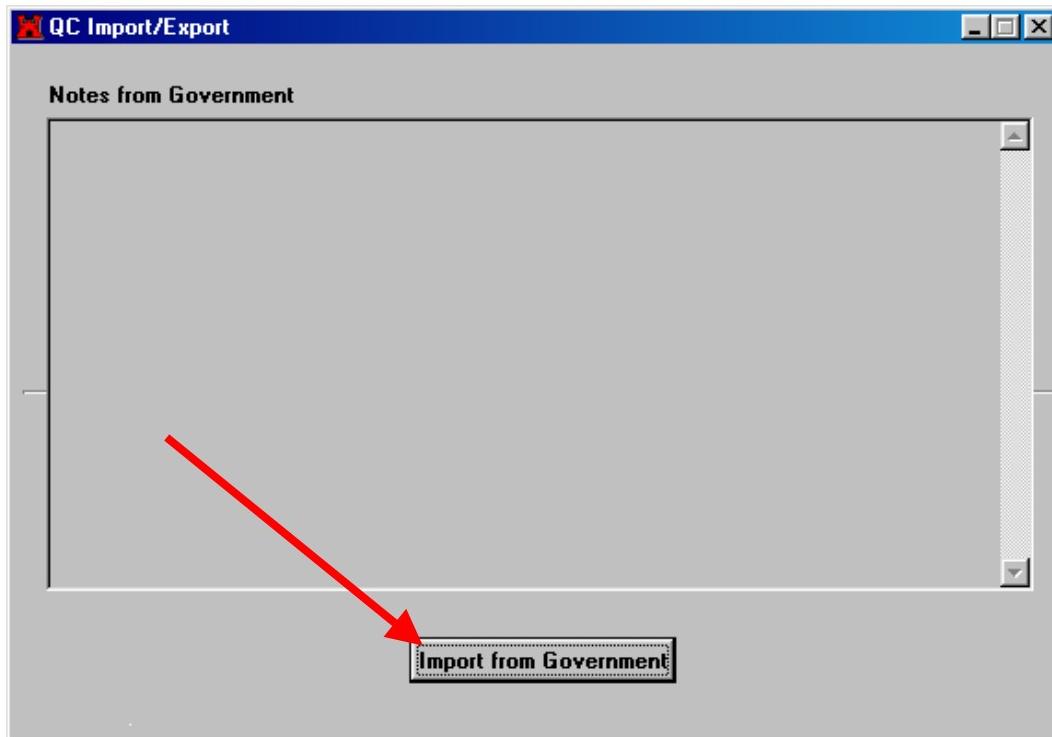
Adding a Contract to the QCS Program

The contract must be exported from the Government's RMS program prior to importing to the QCS program. You cannot use the QCS program independent of the Government's RMS program. The Government's RMS program must be setup to indicate that the "Contractor will use the QCS program." Obtain the file to import your contract from your designated Government Quality Assurance Representative.

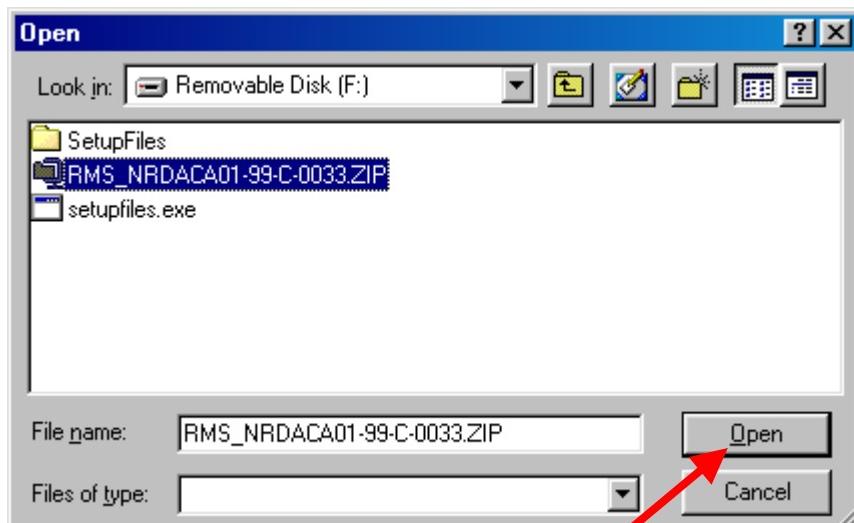
QCS Main Login Screen



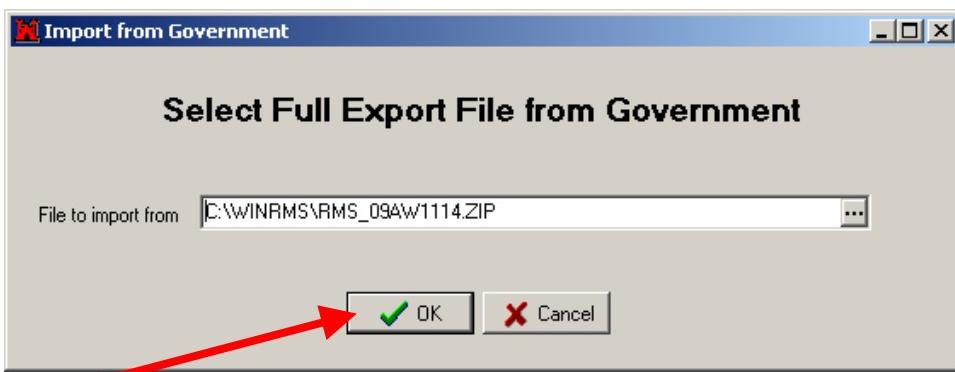
Push the **ADD** button to start the process of adding a contract.

QC Import/Export Screen

Push the *folder* lookup and locate the file to import that was provided by the Government.

Windows Explorer Window

Push the **OPEN** button when you have selected the proper zip file to import.



Push the **OK** button if the correct file is indicated.

The contract will be imported and be reflected on your opening screen.

Technical Support

Your Government Quality Assurance representative is available to answer any questions you have regarding the QCS program. In addition, there is an RMS Support group that may also be of some benefit. You may email your questions/problems to

<http://RMSsupport@usace.army.mil/>. There may be, however, a few days between the time your message is sent, and a reply is received. You may also call the RMS Center at (760) 247-0217.

Chapter 2 – CQM and QC - Planning

What you will learn from this Chapter:

Required Administrative Data

- Prime Contractor Data
- Subcontractor Data



Required QA / QC Data

- Features of Work
- 3-Phase Checks
- QC Tests
- User Schools
- Transfer Property
- Installed Property

Contractor Quality Control – Planning

Overview



This chapter furnishes information on the planning activities required for **Contractor Quality Control** and provides instructions for utilizing the **Quality Control** modules of the QCS program.

Obtaining quality construction is a combined responsibility of the construction contractor and the government. Their mutual goal must be a quality product conforming to the contract requirements. A cooperative and professional working relationship should be established in order to realize this common goal. The contract documents establish the quality required in a project to be constructed. Contracting officers are responsible for assuring the contract documents clearly define the quality of materials and workmanship required for a project and that construction contractors comply with the contract documents and produce the required product. Certain civil works structures are specified by a construction procedure in lieu of end product quality. In these instances, contractors are responsible for the specified procedure and contracting officers must verify design assumptions, and control and assure the end product quality.



In contracts of \$1,000,000 or more, detailed CQC will likely be applied and a properly edited CEGS-01451 should be included in the contract. Inclusion of detailed CQC in construction contracts under \$1,000,000 is discretionary. When construction services are obtained through an international governmental agreement, CQC will not be used unless it is specifically required by that agreement. In any case, the Contractor is reminded to comply with the specific requirements of the contract.

Contractor Responsibility

General. Contractors are responsible for all activities necessary to manage, control, and document work so as to ensure compliance with the contract plans and specifications. The contractor's responsibility includes ensuring adequate quality control services are provided for work-accomplished on-and off-site by his/her organization, suppliers, subcontractors, technical laboratories and consultants. The work activities include safety, submittal management, and all other functions relating to the requirement for quality construction.

Staffing. It is the contractor's responsibility to carefully examine the contract requirements for CQC and provide personnel capable of complying with the CQC requirements of the contract clauses and technical provisions. The CQC staff must be of sufficient size and have the qualifications necessary to ensure contract compliance, whether the prime

contractor, subcontractors or vendors, performs work. The CQC system manager will be an employee of the prime contractor and must report directly to the project superintendent or someone higher in the contractor's organization. The size and composition of the CQC organization may vary as the job progresses. At all times it should be compatible with the level of effort and capability required by the contract and construction schedule.

Quality Control Plans and Procedures. Contractors will be required to prepare a quality control plan for all projects except those excluded under the discretionary authority. Plans and procedures will include the features described in CEGS-01451.

Construction Quality Management Training for Contractors

The Corps of Engineers has been requiring the **Contractors' Quality Control Manager** to complete the course entitled "**Construction Quality Management for Contractors**," since 1994. The certificate obtained for successfully completing the training is good for five years. As the certificates expire, those individuals will be required to retake the training. There are some points about the training that can stand repeating. They are as follows:

- a. The updated course has been coordinated with the Navy and they are using the same tape and student study manual to teach the course as the Corps of Engineers. It has been determined that the Navy will accept the Corps certificates and the Corps of Engineers will accept the Navy's certificates. A copy of the Corps of Engineers and the Navy certificates are shown hereafter for information.
- b. The instructor should be a **Corps of Engineers employee** with solid experience in **Construction Quality Management**, a thorough knowledge of the course material and preferably should have some experience in instruction. It may be suitable to use recently retired Corps employees, but their qualifications and experience level must remain up to date.
- c. To successfully complete the training the student must obtain a score of at least 70 on the Posttest. At the successful conclusion of training, contractor personnel will be given a *Certificate of Completion*. The District shall keep a record of all personnel trained by complete name, social security number, company, and job title. This is necessary to confirm that an individual has had the training if he/she presents a certificate issued by a different District. The certificate should also contain the name and phone number of the District POC to make verification easier. This training certificate is good for five years and the expiration date should be included on the certificate. After that the training must be retaken.
- d. In the event that a certified **Quality Control Manager** is relieved of his/her duties due to unsatisfactory performance, the District administering the contract must revoke the training certificate. If his/her certificate was issued by another District, that District must be notified in writing that the certificate was revoked and for what reason. The training District should then annotate the records to show that the certificate was pulled for unsatisfactory performance. Thus, it is essential that a background check be made any time an individual presents a certificate from another District as evidence of having completed the required training.

- e. All parties will receive the most benefit from the *Mutual Understanding Meeting* if the Quality Control (QC) manager has had the required training before the meeting is held. It is therefore best if the District tries to pre-schedule the training based on their projected execution schedules; Partnering may demand individualized training for complex projects to accommodate contractors' needs and to facilitate development of the Corps/Contractor quality management team in a partnering process. Each QC manager shall be required to obtain the training within 90 days of the NTP if he/she does not have the required certification.
- f. The cost for this training should not be greatly different between Corps of Engineers Districts. The contractor can be charged the cost of reproducing the student study guide and cost of classroom rental if government facilities are not available. If there are large differences, we normally hear about it through the AGC or directly from some of our contractors. Headquarters USACE did not intend to infer in any way that the training should be done in a government facility. That decision is up to individual Districts based on their own unique situations.
- g. The course material will take about 12 hours to complete in a formal classroom situation allowing adequate time for student participation, pre and post tests, classroom breaks and lunch. You will find that this time varies somewhat between different Districts and facilitators.

CQM Certificate – Sample – Corps of Engineers



CQM Certificate – Sample - Navy



has completed the training course
Construction Quality Management
For Contractors

given at _____

Location

on _____

Date

Facilitator

Issuing Official

This certificate expires five years from date of issue

Contractor Quality Control Plans

The goal of the Contractor and the Corps of Engineers should be to provide a quality product to our customers on time and within budget. ER 1180-I-6, *Construction Quality Management*, requires the inclusion of CEGS-01451, *Contractor Quality Control*, in all contracts over \$1,000, 000. This specification section details how the contractor will control his construction activities and obtain the quality he contracted for. It requires him to submit a quality control (QC) plan detailing how he intends to comply with the contract. A good detailed QC plan will help us achieve quality construction and the Contractor QCS module will help accelerate and unify that plan.

The following parts of contractor QC plans need special attention during review and approval of the plan.

- a. The QC plan must include a QC organization description, which shows in detail exactly who is responsible for the quality of each type of work performed. This means the name and qualifications of all the individuals responsible must be listed. If a subcontractor is doing the mechanical work and the foreman of the subcontractor is responsible for the quality of that work, his name, qualifications and responsibilities must be included in the plan. This allows the QA representative to know who is responsible and make sure he attends and is involved in the preparatory phase.
- b. The QC plan must contain a letter to the individual Quality Control Manager named in the plan. This letter outlines his duties and responsibilities and gives authority to halt work, which is not in compliance with contract requirements. An authorized official of the company must sign this letter. The QC manager will issue letters of direction to all other various QC representatives outlining duties, authorities and responsibilities and provide copies of the letters to the government.
- c. The QC plan must identify all control, verification and acceptance testing procedures for each specific test. It shall list the test name, specification paragraph number requiring test, feature of work to be tested, test frequency and the person responsible for each test. It is noted that if the contractor uses a commercial testing lab, the Corps must approve it. If the contractor intends to set up his own lab, then this must also be inspected and approved by the Corps.
- d. The QC plan must describe a procedure for tracking construction deficiencies from initial identification thru correction. It is noted that establishment of the procedures does no good unless the contractor is required to implement and maintain them.
- e. Procedures for reporting, to include forms, must be included in the QC plan. This should include as a minimum, forms for daily QC activities, preparatory and initial meetings, control testing, final inspections and subcontractor QC activities forms.
- f. The QC plan must also contain a list of definable features of work. There may be more than one definable feature of work in each section of the specifications. A definable feature of work is any task, which is separate and distinct from other tasks, has separate control requirements, or is identified by different trades or disciplines.

- g. The contractor must show how they plan to manage the submittals required by the contract. These QC procedures must show who is responsible for the review and approval of all submittals for the contractor, including those from subcontractors, offsite fabricators and suppliers. Note that the individual signing for the contractor is certifying that the submittal meets all contract requirements. If too many submittals sent to the government are not in compliance, then it is that individual who should be either retrained or replaced.

While these are not all of the items required to be in the contractors QC plan, they are problems noted during the last three years of Design Construction Evaluations. The easiest way to review a contractors QC plan is to have a copy of the contract specification section 01451 available and check off each item specified after reviewing it to determine if it will aide the contractor in obtaining the quality specified. Obtaining quality construction is a joint government and contractor effort. If we assure that the contractor has the proper tools in place and understands how they can help him obtain the quality specified, we have made our job easier.

QCS Contractor Quality Control Module

Elements of Quality Control within QCS

- Daily QC Report
- Contractor Staff
- Subcontractors
- Features of Work
- QC Tests
- User Schools
- Transfer Property
- Installed Property

Monitoring contract progress is a responsibility of both the Government and the Contractor. As a contract progresses, both the Contractor and the Government make a daily report as to that progression. These reports include activities started and completed, inspections made, QC requirements met, problems experienced and, if any, accidents encountered, as well as a variety of other information. The QCS program provides a place to enter all of this information pertaining to the Contractor and is easily shared with the Government RMS program.

Why should the Contractor use QCS?

- Once the Contractor enters the initial data and the Government approves the data, a variety of reports can be printed and used by both the Contractor and Government.
- The Contractor can use queries, ranges and sorts to monitor the Quality Control aspects of the contract.

- QCS provides the Contractor an automated tool to print Government required forms and documents to meet contract specification requirements. One such form is the Transmittal Form, ENG Form 4025 and another is the DD Form 1149 for transfer of property.
- QCS gives the Contractor a deficiency tracking system that meets their QC Management Plan requirement as specified in the contract.
- Preparatory and Initial Inspections can easily be scheduled and recorded. The program provides an Inspection Check-sheet to help the Contractor prepare for these inspections.
- QCS can import the activities, scheduled start and finish dates, and values from the Contractor's NAS, if the software used meets the Government's *Standard Data Exchange Format (SDEF)*.

Much of the data entered by the Contractor is interdependent with other area options throughout QCS. Special attention should be placed on **Prep/Initial Dates**, **Activity Start/Finish**, **User School**, **QC Testing**, **Transfer Property**, **Installed Property**, **Issue QC Punch List items**, **Corrected QC Punch List items**, **Corrected QA Punch List items** and **Contractor On-Site** options as they are linked to other vital functions of both the QCS and RMS programs.

Quality Control Requirements

There are areas that must be addressed in the **Planning** of a contract before a Contractor can adequately prepare his Daily Quality Control Report. The Government or the Designer accomplishes some of this preliminary planning, long before the contractor is aware that a potential contract even exists. This includes, among many other things, what QCS and RMS refers to a **QC Requirements**. Each of these requirements is tracked by specific number and is assigned (linked) to a contractor pay activity by the construction contractor. Other items that the Contractor must enter prior to making his daily reports include his staffing intentions, his subcontractors and the definable features of work he will use to manage the inspection process.

Prime Contractor Data

The **Prime Contractor** window is comprised of three (3) tab entry screens, located under ADMINISTRATION from the QCS Contract Menu. Data is entered into each tab separately, beginning with the **Contractor Information** tab.

A screenshot of the QCS Contract Menu window titled "Contract Menu - [09AD0064] DACA09-02-D-0001 0001 FY02 120 Room Dormitory". The menu bar includes File, Help, Home, Administration, Quality Control, Import/Export, Overview, and Reports. The main window title is "Administration - Prime Contractor". On the left is a sidebar with links: Contract Description, Action Items, Prime Contractor (highlighted in red), Subcontractors, Contractor Insurance, Contractor Payrolls, Pay Activities, Progress Payments, Specification Sections, Submittal Register, and Transmittal Log. A red arrow points to the "Contractor Information" tab in the center panel. The "Contractor Information" tab contains fields for Prime's Name (Sundt Construction), Responsibility Code (PRIM), Full Name (Sundt Construction, Inc.), CAGE No., Address (4101 East Irvington Road, Tucson, AZ 85714), CEC No., County (Pima County), Phone, Fax, Site Address (3610 S. 7th St, Davis-Mothan, AZ 85710), and Phone/Fax numbers (745-3042, 745-0106). At the bottom, there is a checkbox for "Government should send mail to:" with options for Contractor's Home Address (selected) and Contractor's Site Address.

Contractor Information

1. **Prime's Name** – Enter an abbreviated name of the Prime Contractor. This is used for simple reports and screens throughout the QCS and RMS programs.
2. **Responsibility Code** – This code should match the Contractor's scheduling package if one is being used. It must be unique and cannot be assigned to any other subcontractor for this contract. An alpha/numeric identifier is almost always used within a commercial scheduling package, such as Primavera, and can easily be imported into the QCS program. The Corps of Engineer's *Standard Data Exchange Format (SDEF)* requires numeric identifiers only, however, the QCS and RMS program accepts either/or.
3. **Full Name and Address** – Enter the Contractor's full name and office address, as you want it to appear on various QCS and RMS reports and contract documents.

4. **County** – Enter the name of the county (parish/ward, etc.) in which the Contractor's office resides. This information is printed in Block 8 of the SF-30 Modification Form.
5. **CAGE No** – Enter the Contractor's CAGE code, as it appears on the Contractor's proposal or the contract award letter. A sample CAGE code is: "OCZE6" or "OCW51". (DFARS 52.252.204-7001, Commercial and Government Entity (CAGE) Code Reporting.) If the Contractor does not have a CAGE code, he may ask the Contracting Officer to request one from the Defense Logistics Services Center (DLSC). The Contractor must complete section B of a DD Form 2051 and request assignment of a CAGE Code. (A partially completed DD Form 2051 should be an attachment within the solicitation package.) The Contractor's CAGE code should be indicated on the executed SF 1442, block 14.
6. **CEC No** – Enter the nine-digit Contractor CEC number (DUNS #), as it appears on the Contractor's proposal or contract award letter. A sample CEC number is "03-807-4381". (FAR 52.204-4, Contractor Establishment Code (CEC)). The CEC is a 9-digit code assigned to a Contractor that contract with a Federal executive agency. The CEC system is a contractor identification coding system that is currently the Dun and Bradstreet Data Universal Numbering System (DUNS). The CEC system is distinct from the Federal Identification Numbering (TIN) system. The Government will obtain a CEC for any awardee that does not have or does not know its CEC. The CEC number should be found on the executed SF 1422, in block 14, immediately preceding the CAGE number.
7. **Phone** – Enter the Contractor's home office telephone number.
8. **Fax** – Enter the Contractor's home office fax number.
9. **Site Address** – Enter the Contractor's site office address.
10. **Phone** – Enter the Contractor's site office telephone number.
11. **Fax** – Enter the Contractor's site office fax number.
12. **Mail To** – Select whether the Contractor's correspondence will be mailed to the HOME or SITE address of the Contractor. In most cases, the original copy of correspondence is sent to the HOME Office, with copies being given to the SITE Office. However, if you indicate that the correspondence will be mailed to the SITE address, all Government generated letters addressed to the Contractor will automatically capture that address.



It is recommended that it be established between the Contractor and the Government at the Pre-Construction Conference as to the contractors desire to have copies of outgoing correspondence provided to his field staff. Some Prime Contractors do not prefer that this be done.

Management / Work Days

The screenshot shows the 'Contract Menu - [L2000014] DACA05-01-C-0015 NA Air Traffic Control Tower' window. The 'Administration' tab is selected. On the left, there's a sidebar with links like 'Contract Description', 'Action Items', 'Prime Contractor', 'Subcontractors', etc. The main area has three tabs: 'Contractor Information', 'Management/Work Days' (which is highlighted with a red arrow), and 'Bond Co./SBA'. Under 'Management/Work Days', there are sections for Project Manager, Superintendent, QC Manager, and Asst. QC Manager, each with name fields and phone/beeper/cellular number fields. Below that is a section for 'Contractor Work Days' with checkboxes for Sunday through Saturday.

Role	Name	PM Phone	PM Beeper	PM Cellular	Super Phone	Super Beeper	Super Cellular
Project Manager	Tracy Hieber	(775) 747-8877			(530) 788-2503		
Superintendent	Mike Kelley						
Asst. Superintendent	Martha Stewart						
QC Manager	Larry Neilson						
Asst. QC Manager	Joan Collins						

Contractor Work Days:

- Sunday
- Monday
- Tuesday
- Wednesday
- Thursday
- Friday
- Saturday

1. **Project Manager** – Enter the name of the Contractor’s Project Manager as it appears within the Contractor’s Quality Control Plan.
2. **PM Phone/Beeper/Cellular** – Enter the Project Manager’s Telephone, Beeper and Cellular numbers in the cells provided.
3. **Superintendent** – Enter the Contractor’s jobsite Superintendent’s name as it appears in the Contractor’s Quality Control Plan and the Contractor’s appointment letter.
4. **Super Phone/Beeper/Cellular** – Enter the Superintendent’s telephone, beeper and cellular numbers in the cells provided.
5. **Assistant Superintendent** – Enter the Assistant Superintendents name if applicable.
6. **Quality Control Manager** – Enter the Contractor’s QC Manager (Full Name). This should match the name within the Contractor’s Quality Control Plan.
7. **Assistant Quality Control Manager** – Enter the name of the Assistant Quality Control Manager if applicable. It should be noted that the Assistant QC Manager must have the same qualifications as the primary QC Manager, including an up-to-date CQM Certificate.
8. **Contractor Work Days** - This screen will be used in other areas of QCS and RMS when

establishing time extensions granted by contract modifications, such as an extension granted due to adverse weather delays. Indicate in the definitive check boxes a "yes" or "no" for the days of the week the Contractor will NORMALLY be performing work on the jobsite. (An empty, or light gray check indicates a "no".)

For example, the work days used should match the workweek used with his NAS/CPM.

Bond Co./SBA

When your contract requires performance and/or payment bonds, this screen must be completed accordingly. FAR, Part 28.1 includes the requirements and FAR Clause 52.228 may be included within the contract.

Consent of Surety is necessary for contract Modifications exceeding certain dollar limits.

The screenshot shows a Windows application window titled "Contract Menu - [G4000107] DACW68-03-C-0002 NA Fish Ladder Exit Modifications". The window has a menu bar with "File" and "Help" options. Below the menu is a toolbar with buttons for "Home", "Administration", "Quality Control", "Import/Export", "Overview", and "Reports". The main content area is titled "Administration - Prime Contractor". On the left, there is a sidebar with links: "Contract Description", "Action Items", "Prime Contractor", "Subcontractors", "Contractor Insurance", "Contractor Payrolls", "Pay Activities", "Progress Payments", "Specification Sections", "Submittal Register", and "Transmittal Log". The main panel contains several input fields and checkboxes. At the top right of this panel, there is a tab labeled "Bond Co./SBA". A red arrow points from the bottom right towards this tab. The fields include:

Bond Number	400SV056802
Bonding Company	United States Fidelity/Guarant
Bond Address	6100 - 219th Street, S.W. Mountlake Terrace, WA 98043
Phone	202-655-9900
Fax	202-654-6788
<input checked="" type="checkbox"/> Contractor is a small business	
<input checked="" type="checkbox"/> Contract requires a small business plan	
Small business plan goal <input type="text"/> 5 %	
<input checked="" type="checkbox"/> Contract Administered by SBA	
SBA	
Office	
Address	
Small Business Administrator	
Name	
Title	

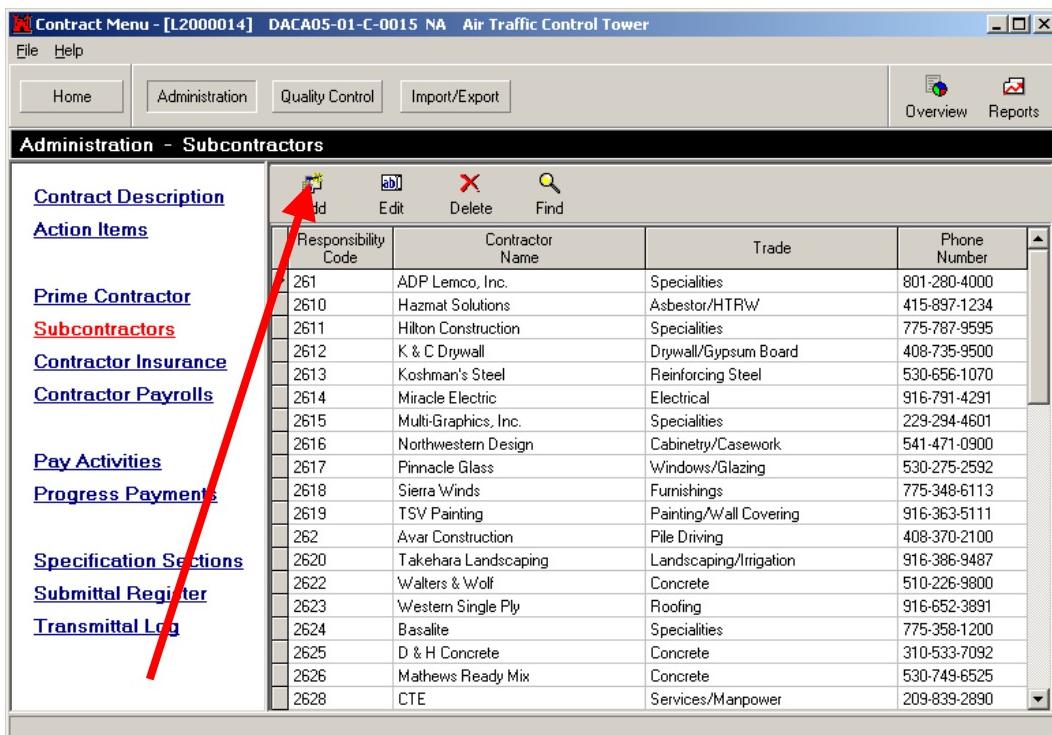
- Bond Number** – Enter the Bond Number as it appears on the contract Notice-to-Proceed letter or other document.
- Bonding Company** – Enter the name of the Bonding agency as it appears on the contract Notice-to-Proceed letter or other document.
- Bond Address** – Enter the address of the Bonding agency as it appears on the contract Notice-to-Proceed letter or other document.
- Phone** – Enter the telephone number of the Bonding agency.

5. **Fax** – Enter the fax number of the Bonding agency.
6. If the Contractor is a Small Business, check the definitive box.
7. If the Contract is required to have a Small Business Plan, check the definitive box.
8. If the Contractor is a Small and Disadvantaged Contractor and the Small Business Administration (SBA) is administering the contract, check the definitive boxes.
9. Enter the SBA Name and Address of the local SBA office assigned to the contract.
10. Enter the Small Business Administrator name and title of the Contracting Officer with SBA who is authorized to sign modifications on behalf of the SBA.

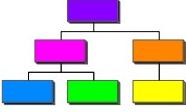
Subcontractor Data

The subcontractor entry is an essential part of the QCS and RMS programs, for example:

1. Attaching a subcontractor to each activity links submittal items to the subcontractor.
2. With the subcontractor attached to activities, QCS and RMS know who has related responsibilities for Preparatory and Initial Inspections.
3. A subcontractor list is necessary to document Labor Interviews.
4. Without the subcontractor data, daily Labor Hours cannot be posted in the Daily Quality Control Report.
5. Subcontractor deficiencies are noted on the Pay Estimate Worksheet.
6. A listing of Subcontractors may be provided to the User at the conclusion of the contract for Warranty of contacts.



Push the **Add** button to add new Subcontractors, or the **Edit** button to edit information on an existing Subcontractor.



A screen such as this should be completed for each Subcontractor working on the contract.

The information is used to track payrolls, insurances and will also give you the capability to sort many of the QCS Reports by the particular Subcontractor.

Subcontractors			
Responsibility Code	0004		
Contractor	L. Sheldon & Co.		
Trade	Trucking/Hauling		
Full Name	L. Sheldon & Company, Inc.		
Address	P.O. Box 5065 Huachuca City, AZ 85616		
POC	Larry		
Phone	520-456-1521	Fax	520-456-2004
<input checked="" type="checkbox"/> Contractor is a Small Business			

1. **Responsibility Code** –

This code should match the Prime Contractor's scheduling package if one is being used. It must be unique and cannot be assigned to any other subcontractor for this contract. An alpha/numeric identifier is almost always used within a commercial scheduling package, such as *Primavera*, and can easily be imported into the QCS and RMS programs. The Corps of Engineer's *Standard Data Exchange Format (SDEF)* requires numeric identifiers only, however, the QCS and RMS programs accepts either/or.

2. **Contractor** – Enter an abbreviated name of the Subcontractor. This is used for simple reports and screens throughout the QCS and RMS programs.

3. **Trade** – Use the lookup to select the MAJOR Trade represented by this Subcontractor.



Lookup	
Search Characters	
Contractor Trades	
Mechanical	<input checked="" type="checkbox"/>
Medical Equipment	<input type="checkbox"/>
Painting/Wall Covering	<input type="checkbox"/>
Pavement Marking	<input type="checkbox"/>
Pest/Termite Control	<input type="checkbox"/>
Pile Driving	<input type="checkbox"/>
Plastering/Stucco	<input type="checkbox"/>
Plumbing	<input type="checkbox"/>
Pre-Engineered Buildings	<input type="checkbox"/>
Prime Contractor	<input type="checkbox"/>
Reinforcing Steel	<input type="checkbox"/>
Search By	
<input checked="" type="checkbox"/> OK <input type="checkbox"/> Cancel	

4. **Full Name and Address** – Enter the Subcontractor's full name and office address, as you want it to appear on various QCS and RMS reports and contract documents.

5. **POC** – Enter the primary Point-Of-Contact at the Subcontractor home office. This name will be used for reporting Warranty issues at the conclusion of the contract.

6. **Phone** – Enter the Subcontractor's home office telephone number.

7. **Fax** – Enter the Subcontractor's home office fax number.

8. **Contractor is a Small Business** – Check this box if appropriate. This will be used to track your success in meeting your small business goals.

Contractor Insurance

Tracking and documenting of contractor insurance is required on typical military construction projects in the United States. In some limited cases, this is also required on civil contracts and contracts performed in overseas (OConus) locations.

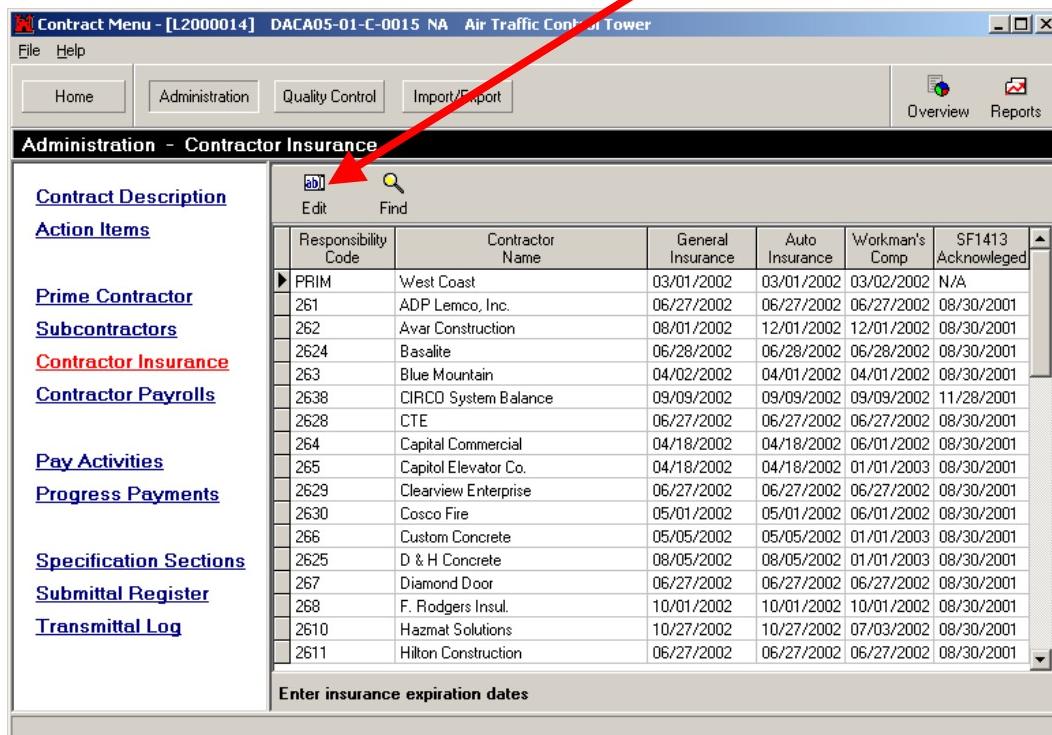
If insurance is required by the contract, it is extremely important that it be tracked and the Prime Contractor keeps all insurances up to date and current within the program. There are many Corps of Engineers offices that will not permit a contractor to be on the site without proof of current insurance.

Some Corps of Engineers offices elect to enter Insurance data themselves, while other offices require the Contractor to enter the data. If the screen is indicated as "**Read Only**", the Government will enter the data after the Contractor provides documentation as required.

If insurance is not shown and current on this screen, it will be listed on the *Pay Estimate Worksheet* each time a *Pay Request* is submitted for payment considerations.

The *Contractor Name* is carried over from the contractor and subcontractor entries previously discussed. If a subcontractor is missing from this listing, you will need to select **Subcontractors** from the left side of the screen and add him to the listing.

Select the **EDIT** button to enter dates that each insurance expires, or the SF1413 acknowledgment is signed by a subcontractor.



Contract Menu - [L2000014] DACA05-01-C-0015 NA Air Traffic Control Tower

File Help

Home Administration Quality Control Import/Export Overview Reports

Administration - Contractor Insurance

Contract Description	Action Items	Responsibility Code	Contractor Name	General Insurance	Auto Insurance	Workman's Comp	SF1413 Acknowledged
Prime Contractor		PRIM	West Coast	03/01/2002	03/01/2002	03/02/2002	N/A
Subcontractors		261	ADP Lemco, Inc.	06/27/2002	06/27/2002	06/27/2002	08/30/2001
Contractor Insurance		262	Avar Construction	08/01/2002	12/01/2002	12/01/2002	08/30/2001
Contractor Payrolls		2624	Basalite	06/28/2002	06/28/2002	06/28/2002	08/30/2001
Pay Activities		263	Blue Mountain	04/02/2002	04/01/2002	04/01/2002	08/30/2001
Progress Payments		2638	CIRCO System Balance	09/09/2002	09/09/2002	09/09/2002	11/28/2001
Specification Sections		2628	CTE	06/27/2002	06/27/2002	06/27/2002	08/30/2001
Submittal Register		264	Capital Commercial	04/18/2002	04/18/2002	06/01/2002	08/30/2001
Transmittal Log		265	Capitol Elevator Co.	04/18/2002	04/18/2002	01/01/2003	08/30/2001
		2629	Clearview Enterprise	06/27/2002	06/27/2002	06/27/2002	08/30/2001
		2630	Cosco Fire	05/01/2002	05/01/2002	06/01/2002	08/30/2001
		266	Custom Concrete	05/05/2002	05/05/2002	01/01/2003	08/30/2001
		2625	D & H Concrete	08/05/2002	08/05/2002	01/01/2003	08/30/2001
		267	Diamond Door	06/27/2002	06/27/2002	06/27/2002	08/30/2001
		268	F. Rodgers Insul.	10/01/2002	10/01/2002	10/01/2002	08/30/2001
		2610	Hazmat Solutions	10/27/2002	10/27/2002	07/03/2002	08/30/2001
		2611	Hilton Construction	06/27/2002	06/27/2002	06/27/2002	08/30/2001

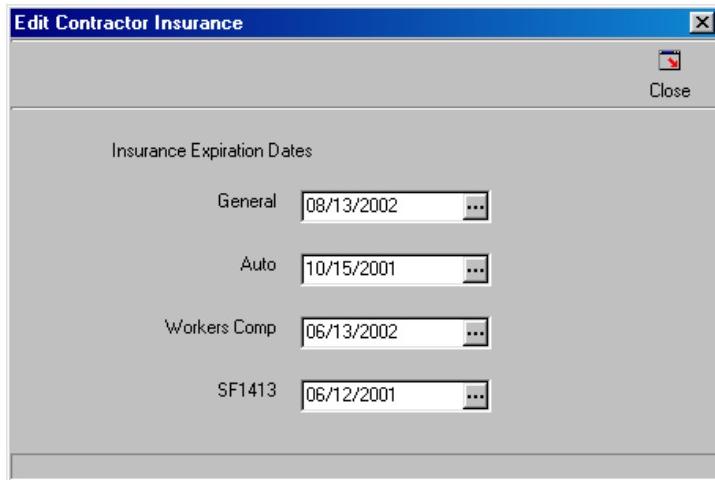
Enter insurance expiration dates



Remember that you enter the dates that the applicable insurance EXPIRES, not the date it was issued or received.

The date entered for the SF1413 is the date the subcontractor signed the acknowledgement.

The SF1413 does not apply to the Prime Contractor.



Contractor Payrolls

Tracking and documenting of contractor payrolls is required on typical military and civil construction projects in the United States that fall under the auspices of the Davis-Bacon Act. In some limited cases, this is also required on contracts performed in overseas (OConus) locations.

If payrolls are required to be tracked, it is extremely important that it be tracked and the Prime Contractor keeps all payroll reporting up to date and current within the program.

Some Corps of Engineers offices elect to enter payroll data themselves, while other offices require the Contractor to enter the data. If the screen is indicated as "**Read Only**", the Government will enter the data after the Contractor provides documentation as required.

If a payroll is not shown and current on this screen, it will be listed on the *Pay Estimate Worksheet* each time a *Pay Request* is submitted for payment considerations.

Quality Control System

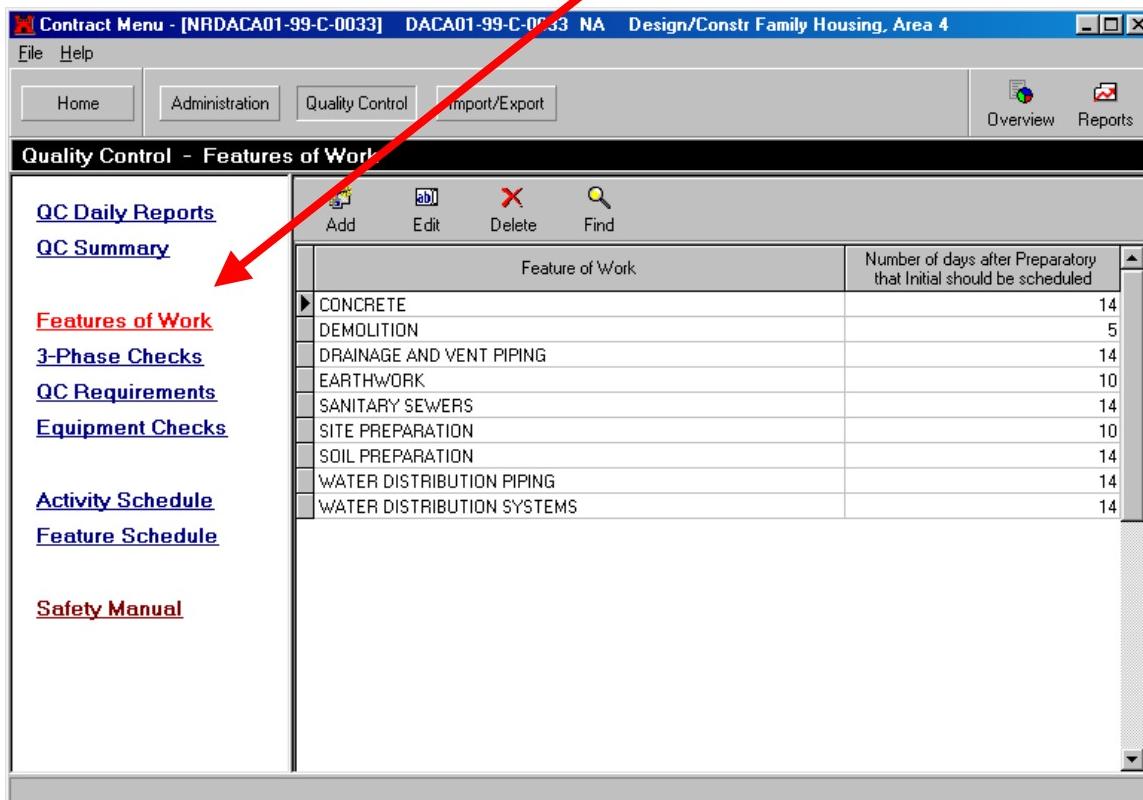
The **Contractor Name** and **Responsibility Code** are carried over from the contractor and subcontractor entries previously discussed. If a subcontractor is missing from this listing, you will need to select **Subcontractors** from the left side of the screen and add him to the listing.

Contract Menu - [09AD0064] DACA09-02-D-0001 0001 FY02 120 Room Dormitory

File Help		Home	Administration	Quality Control	Import/Export	Overview	Reports																																																																																																																																																																																																																																
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QC Planning Data

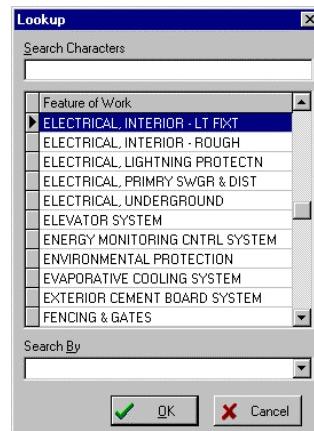
The next area of contract planning activities can be found under **QUALITY CONTROL**, and includes the *Features of Work*, *3-Phase Checks* and *QC Requirements* as required by the contract.



Features of Work

In accordance with the terms of the contract, the *Definable Features of Work* is required to be listed in the contractors' Quality Control Plan. Using QCS to create that list is an easy way for the Contractor to meet that requirement. However, even more important, **Features of Work** are tied to the contractor's pay activities providing both the Government and the Contractor invaluable information.

Features of Work are considered to be *general* categories of construction work that are referenced in the contract specifications. A feature can be thought of as a phase of work requiring a separate *Preparatory Inspection* (typically, there is at least one for every technical specification section, with many having multiple). **It is important that both the Contractor and**



the Government have a clear understanding of the exact type of work the Feature of Work represents.

Press the **ADD** button to create each *Feature of Work*. Then, enter the data in the pop up screen by using the lookup provided, or by typing directly into the cells. Close the window when completed and repeat as needed.

The planned number of days between the Preparatory and Initial Inspection should be carefully selected. The Initial Inspection always takes place following the Preparatory Inspection, but AFTER a representative sample of the work has been placed. This is to ensure that the quality and workmanship reflect the agreements reached and discussions that took place during the Preparatory Inspection meeting.



Within QCS and RMS, **Features of Work** are linked to

3-phase inspection checks. As such, **Features of Work** are an integral part to the power of the QCS *Inspection Check Sheets* and should be considered quite carefully.

The contractor will later attach (link) each pay activity to one of the **Features of Work**. Such pay activity can be linked to only a single feature. Yet, features can contain many pay activities.

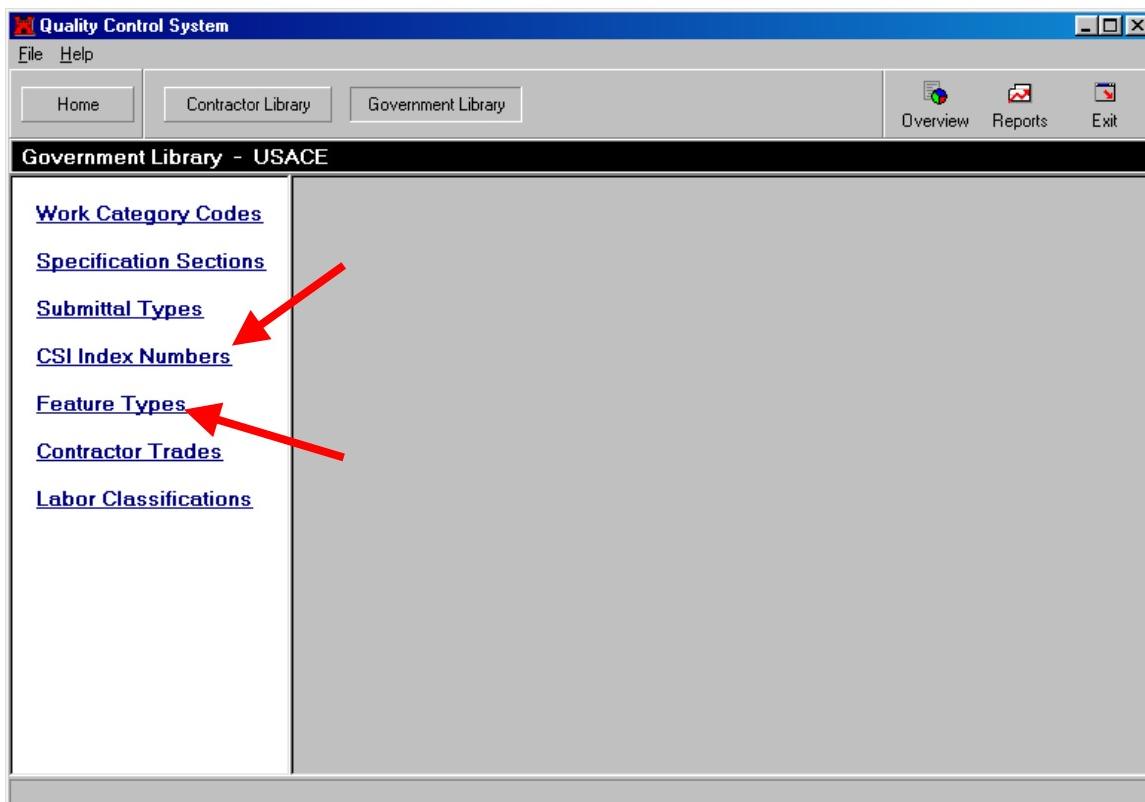
3-Phase Checks

The *3-Phase Checks* within this QCS program, and the Government RMS program, are numbered, generally following the **CSI** specification format. The CSI-based numbering system is used in such references as *Sweets Catalogs*, *MEANS Estimating Books*, *Military Specifications*, and so forth. This is done in QCS and RMS to categorize various comments and items where they can easily be remembered and found and to minimize duplication of comments in various areas.

How Features and 3-Phase Checks are related

The **GOVERNMENT LIBRARY**, accessed from the main QCS Menu (Logon Menu), includes the listing of the **CSI Index Numbers** and **Feature Types** that are used in the QCS and RMS programs. The libraries are the mainstay of the 3-phase inspection check worksheets. Extensive relationships have been established based on previous construction experience and this can be invaluable as you manage your contract. Each of the feature types has a set of checks linked to them.

Government Library Window



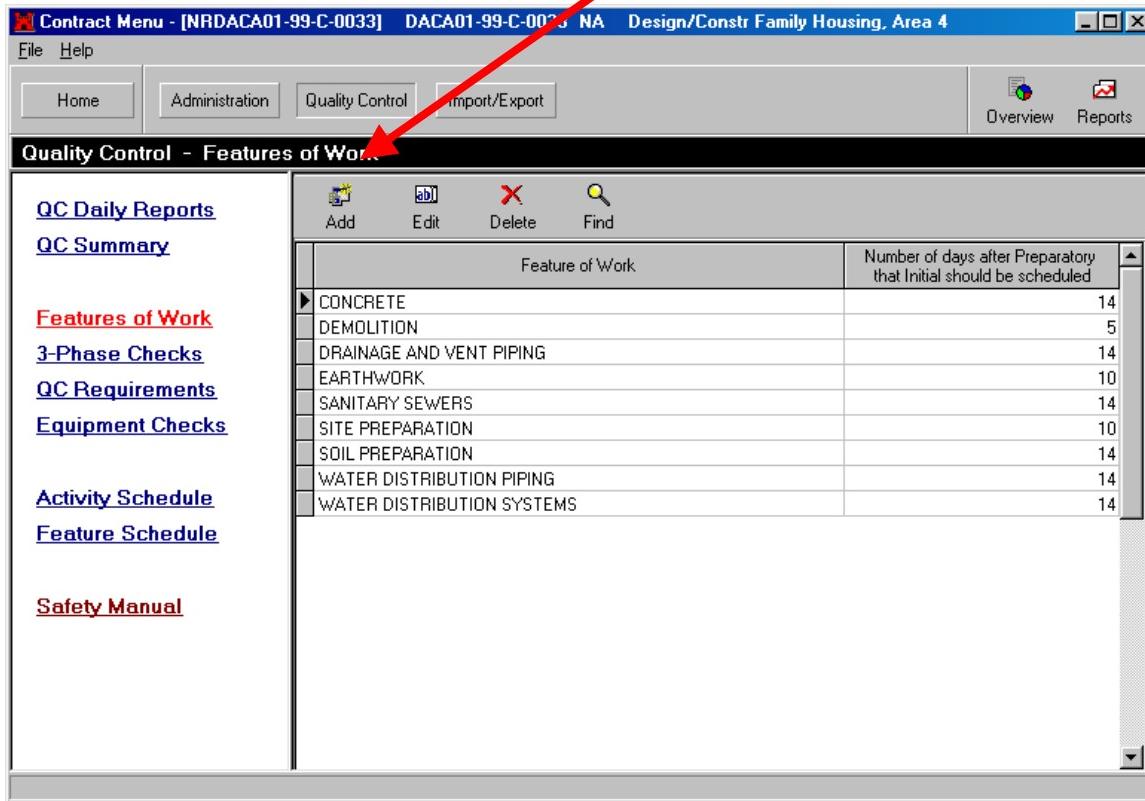
The information from the Government library cannot be changed, deleted or edited within the QCS program. The information is used mostly in the background, as the Government QA staff controls it.

The contractor is able to add **contract specific** 3-phase checks as needed. That process, and the interface with the Government library entries, will be explained hereafter.

Contract Menu – Features of Work

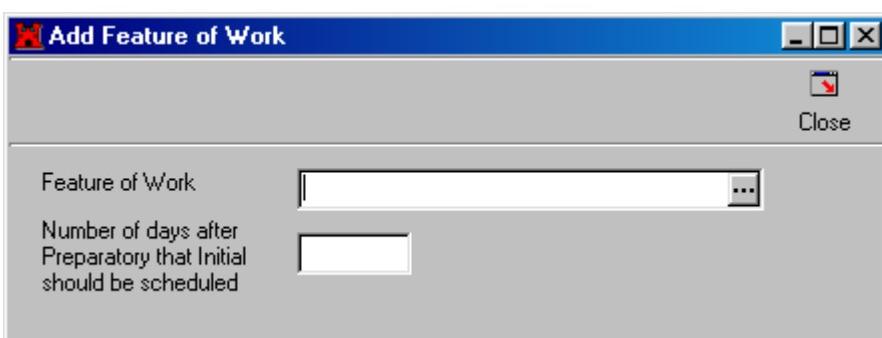
This is the entry point for the contractor **Features of Work**, as is required by the contract. The contractor is responsible to ensure that the features selected represent the work required by the contract and are addressed within his Quality Control Plan.

Push the **ADD** button to add the necessary features.



The screenshot shows the 'Contract Menu - [NRDACA01-99-C-0033] DACA01-99-C-0033 NA Design/Constr Family Housing. Area 4' window. The 'Quality Control' tab is selected. A red arrow points to the 'Add' button in the toolbar. The main area displays a table of 'Feature of Work' items:

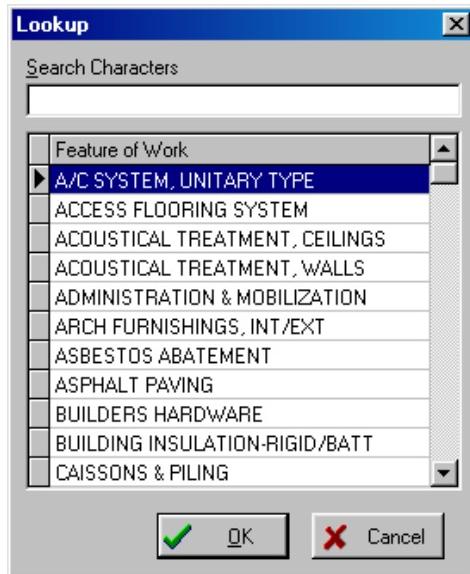
Feature of Work	Number of days after Preparatory that Initial should be scheduled
CONCRETE	14
DEMOLITION	5
DRAINAGE AND VENT PIPING	14
EARTHWORK	10
SANITARY SEWERS	14
SITE PREPARATION	10
SOIL PREPARATION	14
WATER DISTRIBUTION PIPING	14
WATER DISTRIBUTION SYSTEMS	14



The 'Add Feature of Work' dialog box contains fields for 'Feature of Work' and 'Number of days after Preparatory that Initial should be scheduled'. There is also a 'Close' button.

From this popup screen, you can type the description of the **Feature of Work** directly in the cell or, alternatively, use the lookup and make a selection from the list that is embedded within the QCS program.

You also enter the anticipated days after the *Preparatory Inspection* that the *Initial Inspection* will be scheduled.

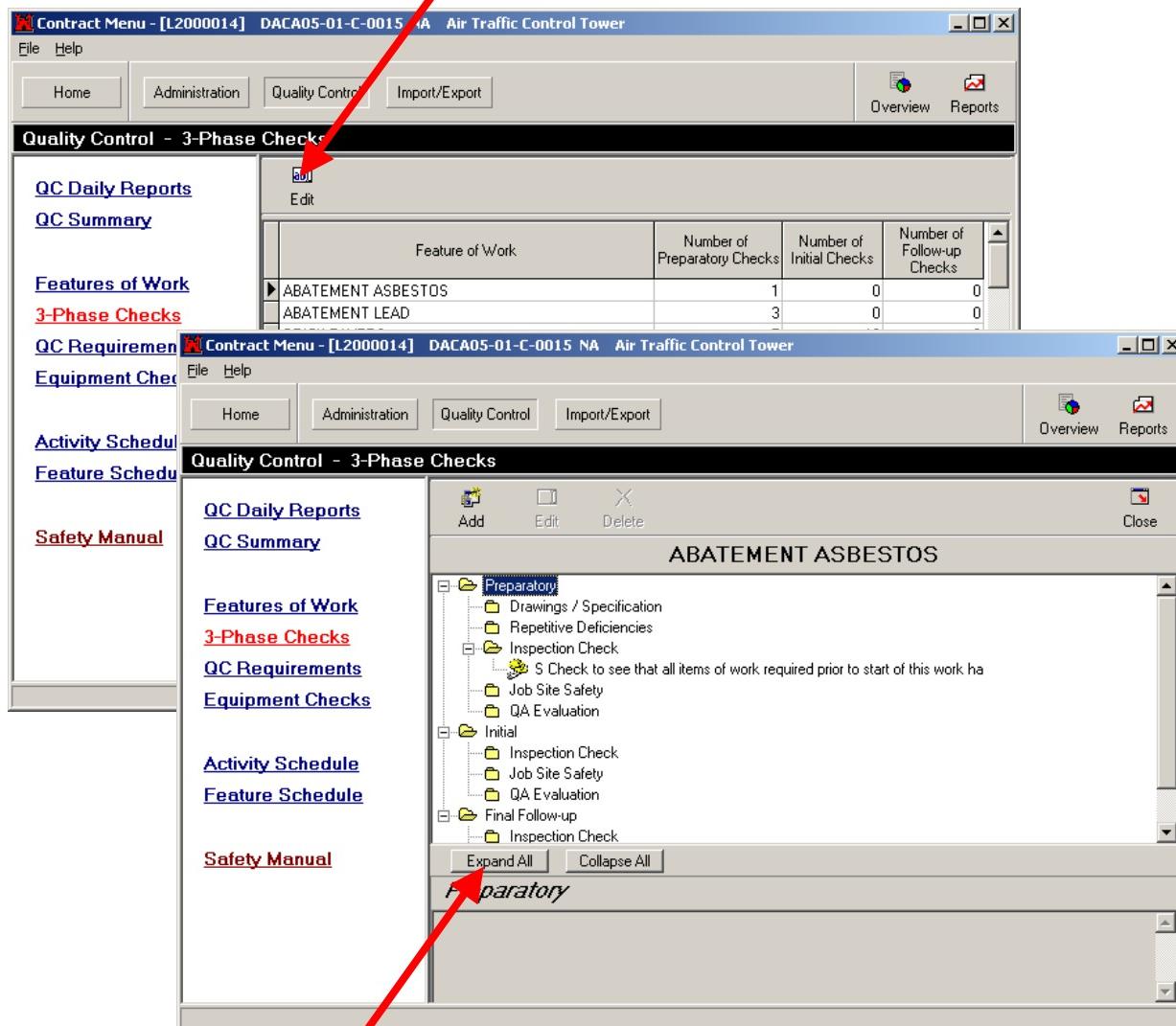


Repeat this process for all desired *Features of Work*.

Contract Menu – 3-Phase Checks

For each **Feature of Work**, you can add contract specific checks to be used during the 3-phase control process of the contract.

You will need to **EDIT** each **Feature of Work** to link them to your 3-phase checks. Push the **EDIT** button to begin.



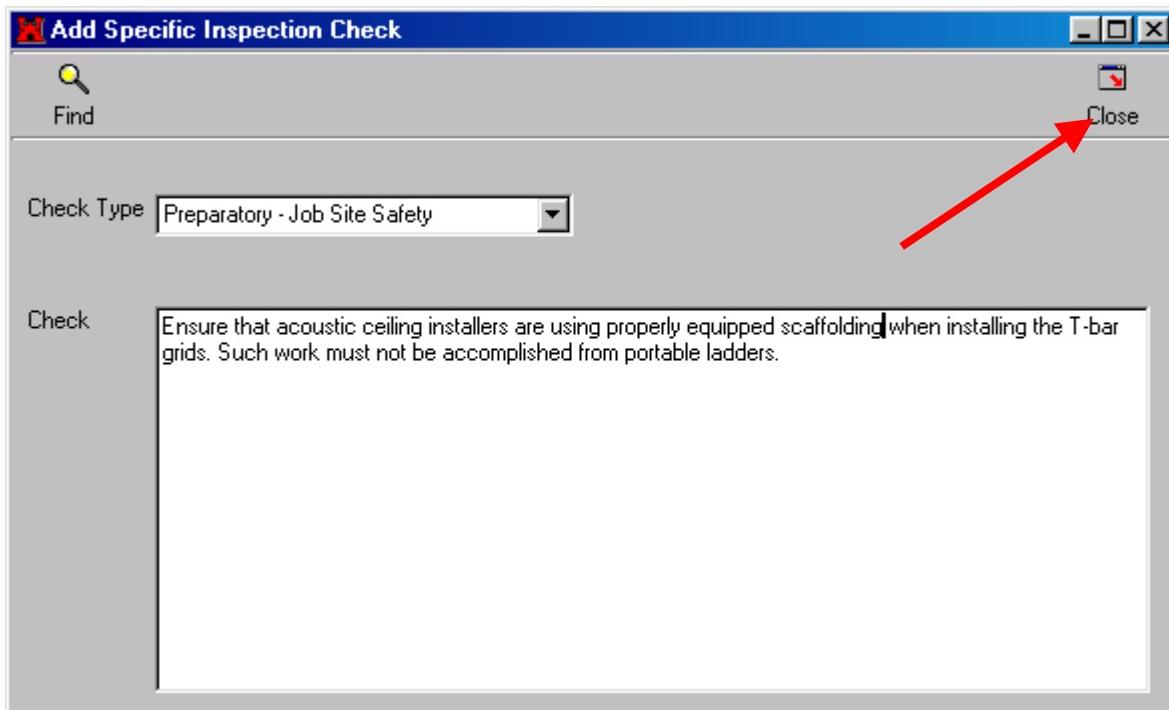
In this example, the **Expand All** button has been pushed to show the different selections available in which to place the desired check.

Your checks will be placed relative to the period that is most applicable. For example, all checks placed under the categories falling under "*Preparatory*" will be completed PRIOR to work beginning on any activity linked to that particular **Feature of Work**. Those falling under "*Initial*"

will be conducted AFTER A REPRESENTATIVE SAMPLE of the work has been completed. The "Final Follow-up" items will be conducted when all activities for that feature have been completed.

Note, however, that the Contractor CQC staff conducts "follow-up" inspections on a daily (continuous) basis to ensure that all work is placed as required by the contract and is in accordance with the CQC Plan prepared by the contractor and approved by the government.

For our example here, let's add a 3-phase check for our selected feature, "Acoustics", that will take place during discussions of the up-coming "Jobsite Safety" considerations in planning for this work.



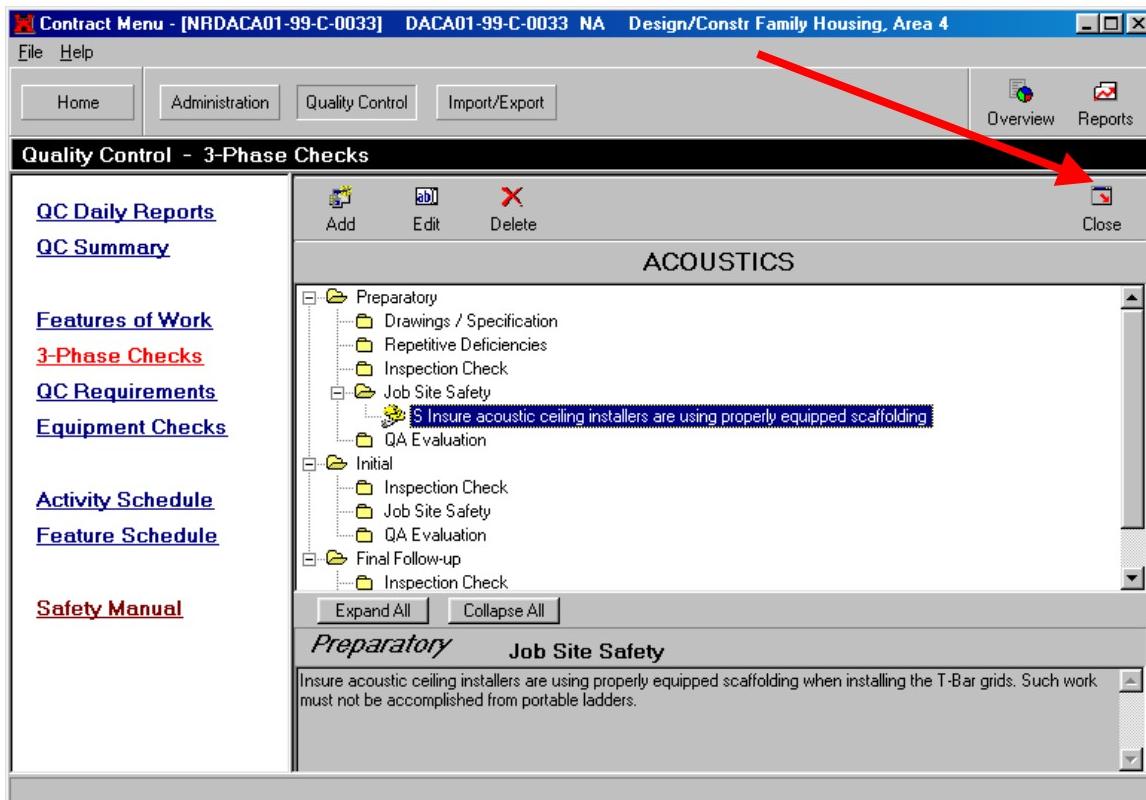
You can place your cursor on the desired selection (*Preparatory – Job Site Safety*) and push the **ADD** button, or you can push the **ADD** button and then use the drop-down menu to make the selection.

Enter the desired comments (checks) in the memo field and push **CLOSE** button when complete.

The comment will be highlighted when you close the previous screen and you can read the comment in the window at the bottom of the screen. When you have multiple comments you will be able to scroll through each one to read and review them.

You also have the ability to **EDIT** or **DELETE** comments that have been entered by the contractor in the QCS program. You cannot **EDIT** or **DELETE** comments that have been entered by the Government RMS program.

CLOSE this screen when complete with all entries.



You can now see at a glance the number of **3-phase Checks** entered for each of the three periods for all *Features of Work*.

The screenshot shows a software application window titled "Contract Menu - [NRDACA01-99-C-0033] DACA01-99-C-0033 NA Design/Constr Family Housing, Area 4". The menu bar includes "File Help", "Home", "Administration", "Quality Control" (which is selected), and "Import/Export". On the right, there are "Overview" and "Reports" buttons. The main area is titled "Quality Control - 3-Phase Checks". A sidebar on the left contains links: "QC Daily Reports", "QC Summary", "Features of Work", "3-Phase Checks" (in red), "QC Requirements", "Equipment Checks", "Activity Schedule", "Feature Schedule", and "Safety Manual". The main content area displays a table with the following data:

Feature of Work	Number of Preparatory Checks	Number of Initial Checks	Number of Follow-up Checks
ACOUSTICS	1	0	0
CONCRETE	0	0	0
DEMOLITION	0	0	0
DRAINAGE AND VENT PIPING	0	0	0
EARTHWORK	0	0	0
SANITARY SEWERS	0	0	0
SITE PREPARATION	0	0	0
SOIL PREPARATION	0	0	0
WATER DISTRIBUTION PIPING	0	0	0
WATER DISTRIBUTION SYSTEMS	0	0	0

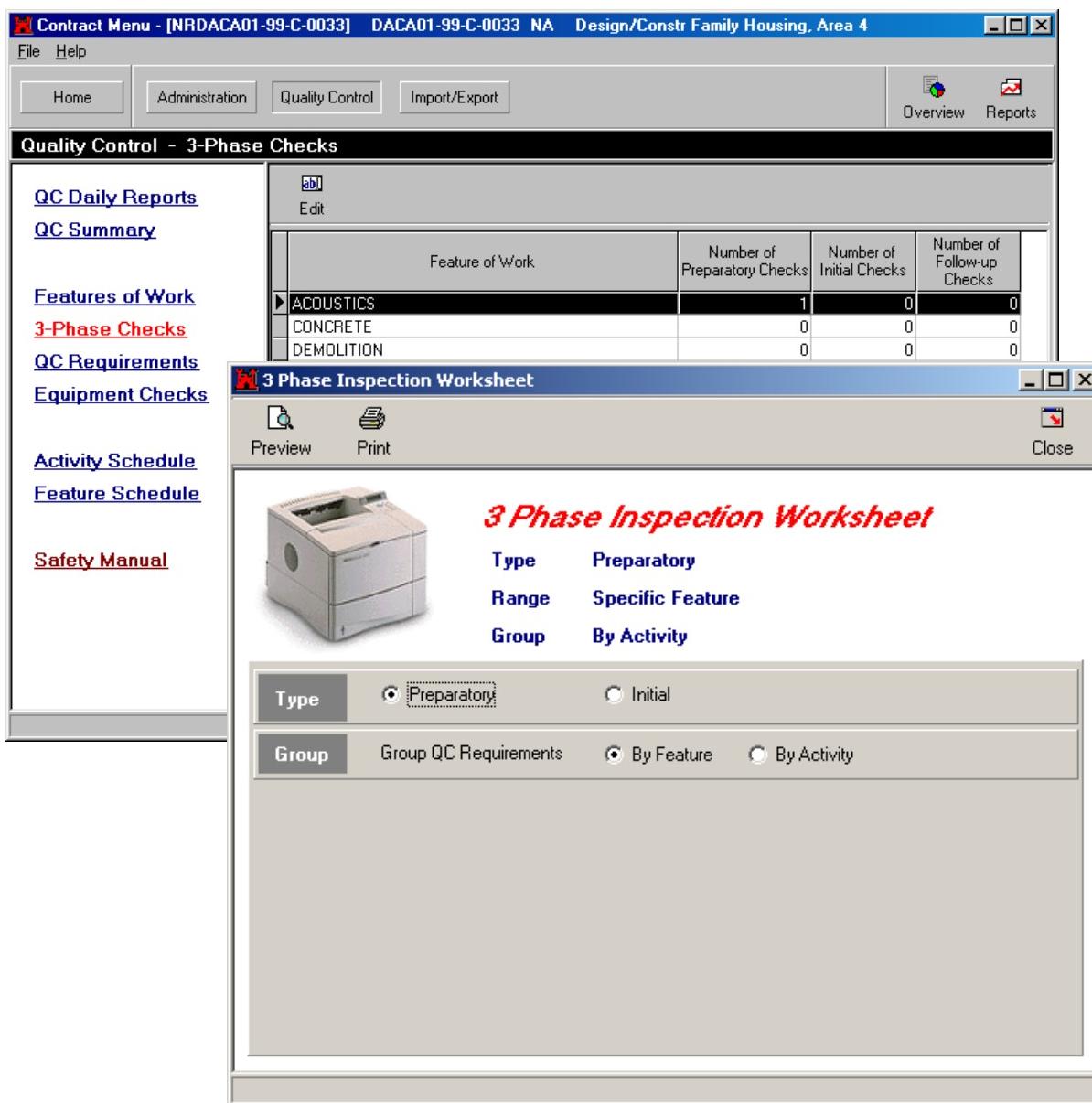
If you do not have any checks for a particular period (e.g., preparatory – initial – follow-up), you probably need to reconsider the work that will be taking place.



Let's now review a 3-Phase Inspection Checklist to see how the comment we entered will appear. Push the **REPORTS** button at the top right hand side of the screen.

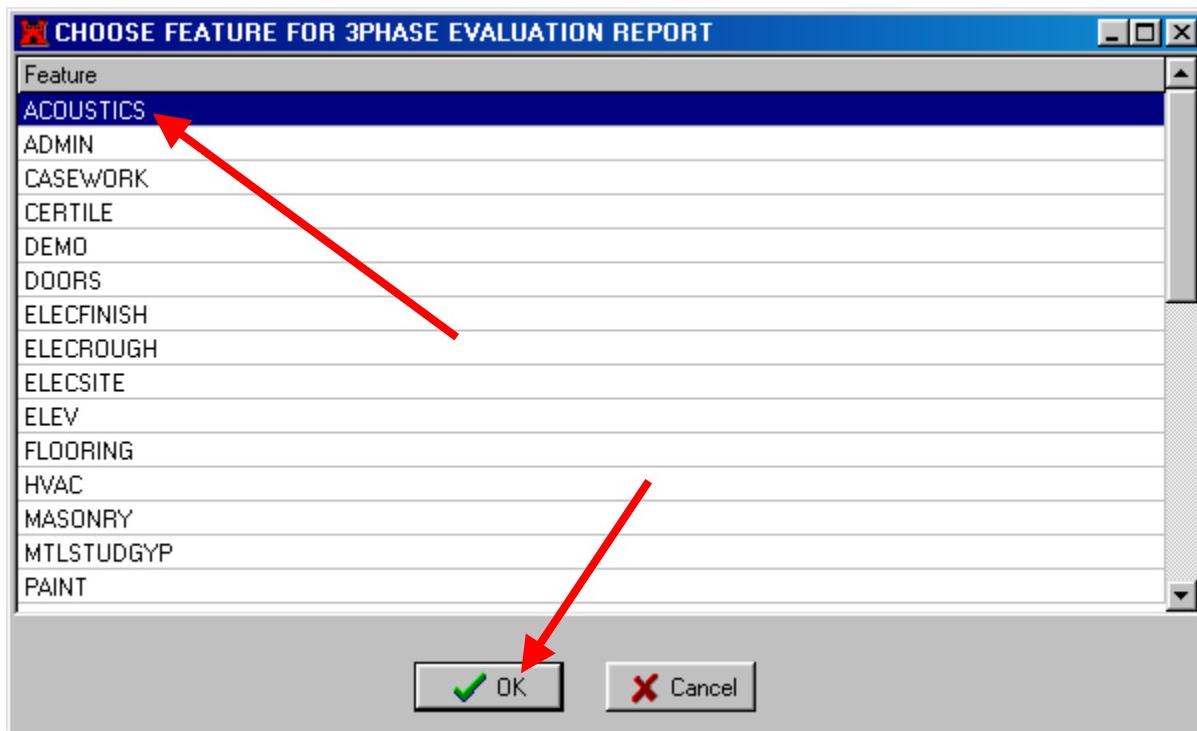
Reports – 3-Phase Inspection Checklists

Our report is a **CONTRACT** related report. Therefore, ensure that you have pushed the **CONTRACT** button, at the top of the screen. The report is then found under the category of **QUALITY CONTROL**. Push the “*3-Phase Inspection Worksheet*” to the right of the screen to review the report.

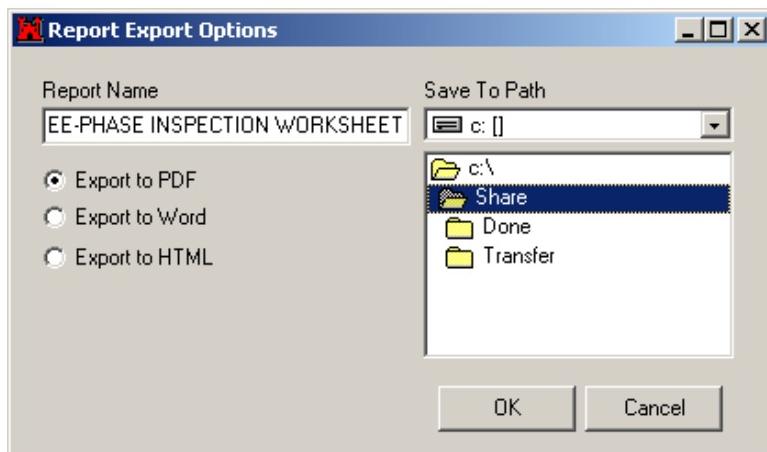


The report can take on several “looks and formats”, but we will select the **TYPE** (*Preparatory*) and **GROUP** (*By Feature*) and **PREVIEW** the report by pushing the **PREVIEW** button at the top left of the window.

We then simply highlight the *Feature of Work* we desire the report to reflect. In this case, choose “*Acoustics*” in accordance with our previous entry and push the **OK** button at the bottom of the window.



The report will appear and may be reviewed prior to printing. It can also be exported to file in MS © Word or HTML format or to an Acrobat © PDF file.



The next images show the report exported as a Word document.

Quality Control System

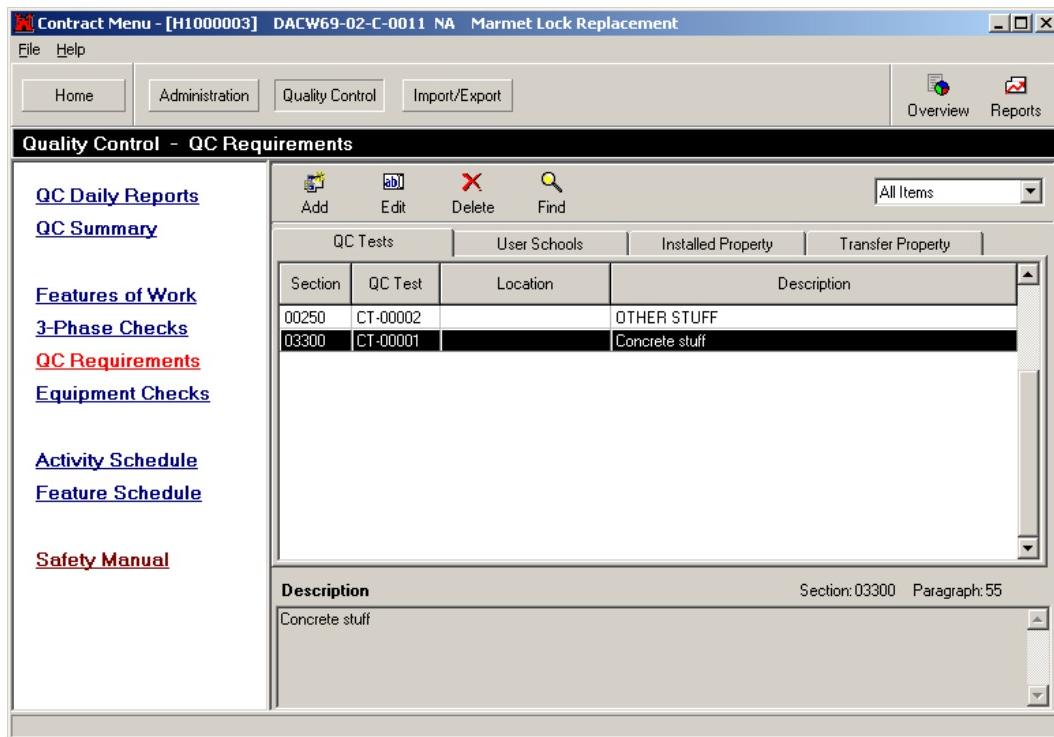
<p style="text-align: center;">Facility Modernization of DeCA DACA09-99-D-0020 Los Angeles District</p> <p style="text-align: center;">PREPARATORY INSPECTION</p>	14 Aug 2001																																								
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<p>D. LABOR RATES -</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; width: 30%;">LABOR CLASSIFICATIONS</th> <th style="text-align: center; width: 15%;">BASIC RATE</th> <th style="text-align: center; width: 15%;">FRINGE BENEFITS</th> <th style="text-align: center; width: 15%;">PLUS %</th> <th style="text-align: center; width: 25%;">TOTAL WAGE/HR</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>		LABOR CLASSIFICATIONS	BASIC RATE	FRINGE BENEFITS	PLUS %	TOTAL WAGE/HR																																			
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<p>E. REVIEW CONTRACT DRAWINGS AND SPECIFICATIONS -</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; width: 45%;">DRAWING / SPEC. NO</th> <th style="text-align: left; width: 55%;">COMMENTS / CONFLICTS</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table> <p style="text-align: right;">DISCUSSED Yes/ No/ NA</p> <p>1. _____ 2. _____ 3. _____ 4. _____</p>		DRAWING / SPEC. NO	COMMENTS / CONFLICTS																																						
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Facility Modernization of DeCA DACA09-99-D-0020 Los Angeles District		14 Aug 2001
PREPARATORY INSPECTION		
DEFINABLE FEATURE OF WORK : ACOUSTICS		
G. INSPECTION CHECKS - Cont.		
4. _____		
H. JOB SITE SAFETY -		
1. Ensure that acoustic ceiling installers are using properly equipped scaffolding when installing the T-bar grids. Such work must not be accomplished from portable ladders. 2. _____ 3. _____ 4. _____ 5. _____		IN COMPLIANCE Yes / No / NA _____
I. QUALITY ASSURANCE EVALUATION NOTES -		
1. _____ 2. _____ 3. _____ 4. _____		DISCUSSED Yes / No / NA _____
<p style="background-color: yellow; border: 1px solid black; padding: 5px;">This is the comment we added relative to our "Job Site Safety" issue with the Feature of Work entitled "ACOUSTICS".</p>		

QC Requirements

QC Requirements include four (4) separate items for control and tracking. Each of the items is located under a separate Tab, as can be seen below. Each of these will be discussed in detail.

- 1. QC Tests**
- 2. User Schools**
- 3. Installed Property**
- 4. Transfer Property**



Quality Control Tests

Quality Control Tests are defined in the Contract and are based on engineering and construction judgment as to the type and number of tests to be accomplished. After the award of the contract, the Contractor will further define the method and quantity of tests based on the material quantity and/or equipment options he has chosen to incorporate into the work. These tests are given the prefix "CT" (Control Test) and take the form of "CT-####" for numbering and tracking purposes contained in various reports. The Contractor is responsible for performing the tests and reporting the results of the tests to the Government. If a test fails, the Contractor must correct the problem and report that it is corrected. This reporting is accomplished within the Contractor's Daily Quality Control Report (QCR).

With the TAB "QC Tests" selected, push the **Add** button to add QC tests. The QCS program will select the next sequential number. This number cannot be changed.

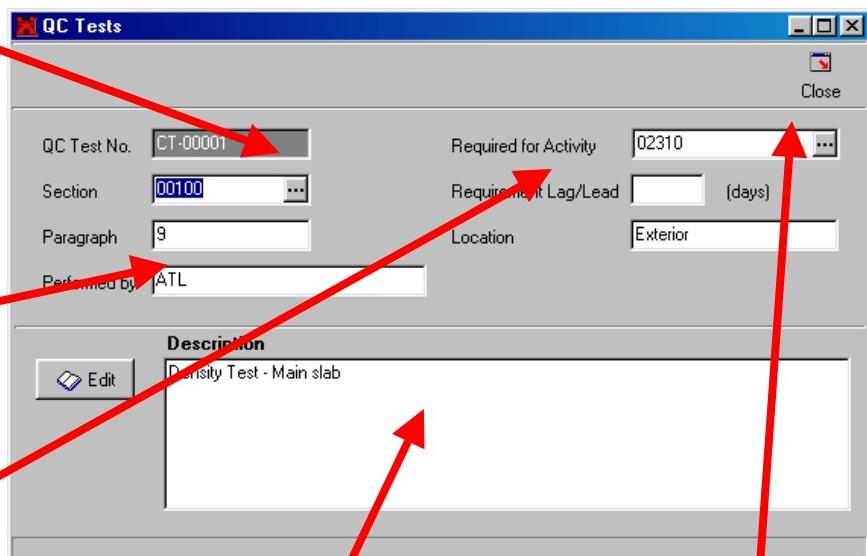
QC Tests Window

Use the lookup to select the related specification section for this test and follow that by adding the referenced paragraph number.

Indicate who will perform the Test and where it is located. Reports can produce a listing by *Location* or *Responsibility*.

Indicate the number of days before or after the activity begins that the test is required to be performed. (A

"+" will occur AFTER activity start
And a "-" will occur PRIOR to the activity starting.)

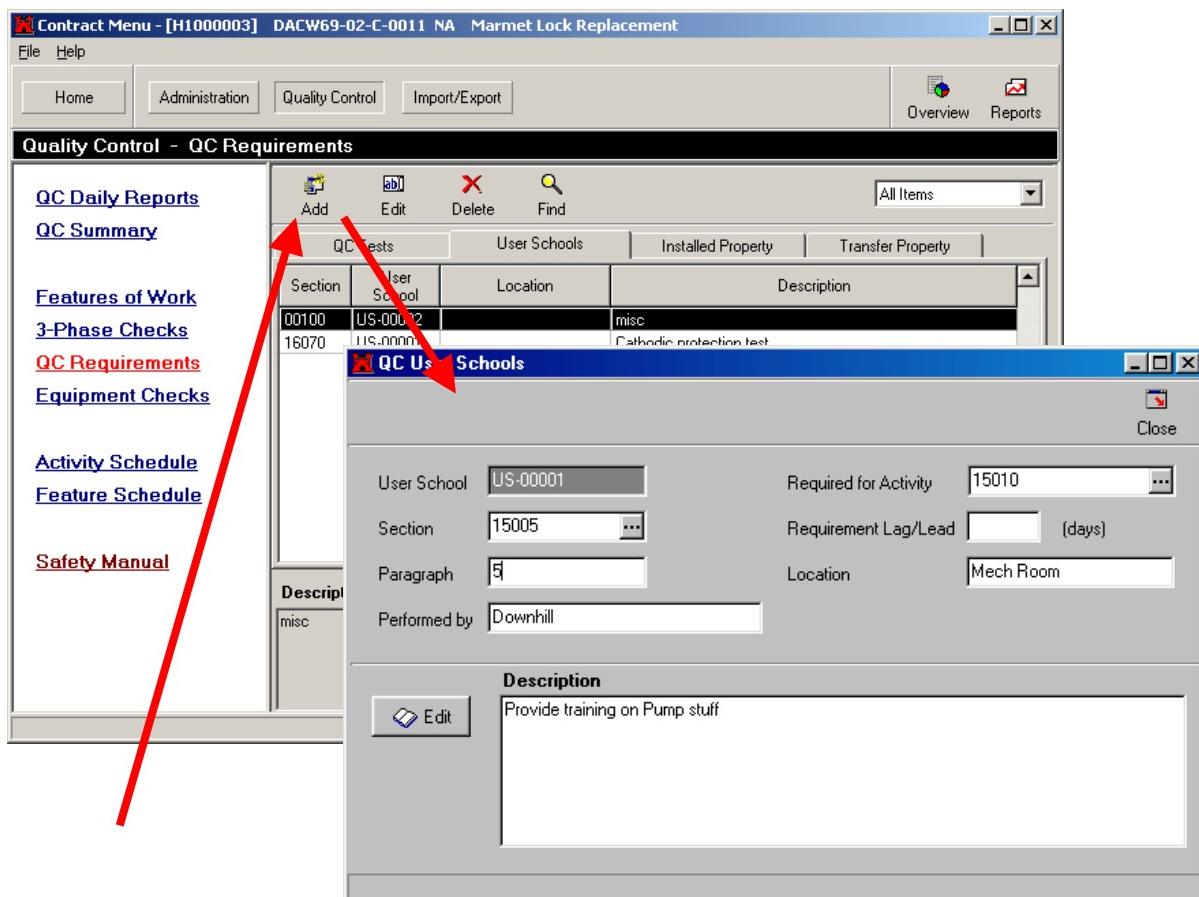


The *Required for Activity* entry is critical and is tracked to completion in many areas of QCS. Use the lookup to select the *Pay Activity* for this test.

Enter an appropriate description of the test and repeat the process for all required QC Tests to be performed. The number and type of test should match the Contractor's Quality Control Plan.

User Schools

User Schools represents the *Training or Instruction* the contractor must provide the Customer on equipment or systems provided and installed as part of the contract. They have the prefix “**US**” and take the form of “**US-####**” for numbering and tracking purposes. As each session of the *Training or Instruction* is completed, it is reported on the Contractor’s Daily QCR. A Government representative may ensure that it was accomplished appropriately and if not, have it repeated to comply with the contract documents. The Customer (User) will often neglect attending the training and then complain that none was offered. Our records can protect the Corps of Engineers and the contractor from that situation.



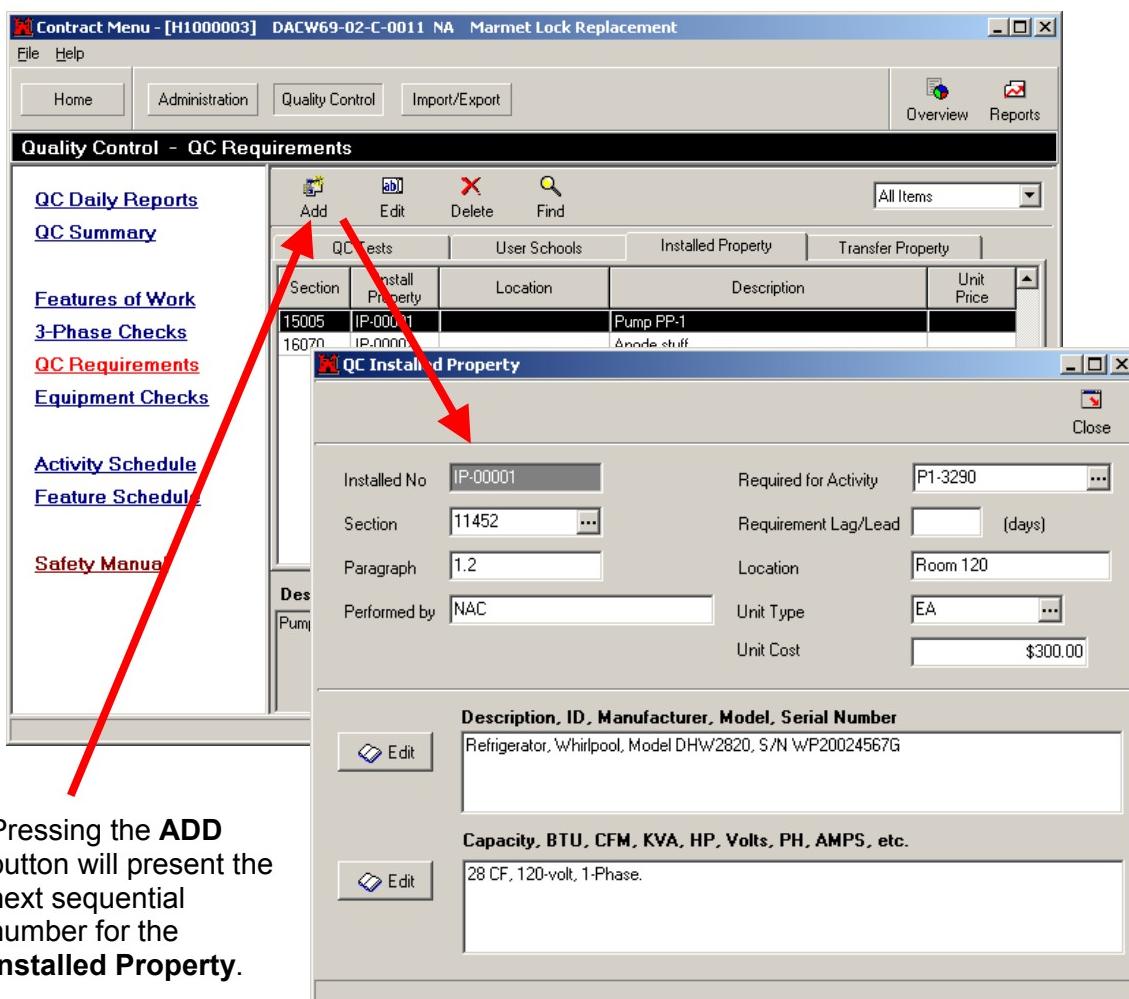
Pressing the **Add** button produces the next sequential number for the **User School**.

Use the lookup to select to appropriate specification section, enter the paragraph number and use the lookup to link the **User School** to the Contractor Pay Activity.

The Description of the required schooling or training should be complete and accurate.

Installed Property

Installed Property are those items of equipment that are incorporated into the design of a facility. These are typically acknowledged as those pieces of equipment that may require maintenance, have serial numbers and can be accounted for individually. It is the Designer that specifies the equipment, based upon Design guidance provided by the Government Design or Using Agency. These items are given the prefix "IP" and take the form of "IP-####" for numbering and tracking purposes. As the **Installed Property** arrives at the jobsite, it is compared to the approved Shop Drawings for conformance to the contract; the serial number and other information is recorded and reported within the Daily QCR.



Pressing the **ADD** button will present the next sequential number for the **Installed Property**.

Use the lookup to select to appropriate specification section, enter the paragraph number and use the lookup to link the **Installed Property** to the appropriate contractor Pay Activity (**P1-3290** in this example).

Indicate the number of days before or after the activity begins that the installed property is required to be performed. (A “+” will occur **AFTER** activity start and a “–“ will occur **PRIOR** to the activity starting.)

Enter the Description, ID, Capacity, etc., for the item in the applicable fields. The preliminary listing will typically be as shown on the contract drawings. However, as submittals are provided for the property, these fields should be updated. After the property is received the actual serial number and confirmation of other data should be entered to accurately reflect the particulars of the property.

Transfer Property

Transfer Property is that property that “changes hands” during the construction process. Examples would include Government Furnished Property (GFP) that the contractor would install or consume during the contract performance. It would also include spare parts and supplies that are furnished by the contractor as part of the contract requirements. It could also include equipment or materials that were deleted as part of a contract modification and that were beneficial for the Government to retain rather than get some minimum token credit for the deletion. These items are given the prefix “TP” and take the form of “TP-####” for numbering and tracking purposes. As the contractor receives or provides the **Transfer Property** it is reported within his Daily QCR. The Government should also track the property on *DD Form 1149* and include it with the contract *Closeout Documents*.

Pressing the **ADD** button will present the next sequential number for the **Transfer Property**.

The screenshot shows the Quality Control System interface with the following details:

- Main Window:** "Contract Menu - [H1000003] DACW69-02-C-0011 NA Marmet Lock Replacement".
- Menu Bar:** File, Help, Administration, Quality Control, Import/Export, Overview, Reports.
- Left Sidebar:**
 - QC Daily Reports
 - QC Summary
 - Features of Work
 - 3-Phase Checks
 - QC Requirements** (highlighted in red)
 - Equipment Checks
 - Activity Schedule
 - Feature Schedule
 - Safety Manual
- Central Area:** "Quality Control - QC Requirements" window. It has tabs for QC Tasks, User Schools, Installed Property, and Transfer Property. The Transfer Property tab is selected, showing a table with columns: Section, Install Property, Description, Total Units, Units Transferred, Remaining Units, and Unit Price. Two rows are listed:

Section	Install Property	Description	Total Units	Units Transferred	Remaining Units	Unit Price
00350	TP-00002	dbe items				
12320	TP-00001	Reach 'em stuff				
- Modal Dialog:** "QC Transfer Property" dialog box. It contains fields for Transfer No (TP-00001), Required for Activity (09300), Section (09310), Requirement Lag/Lead (150 days), Paragraph (8), Location (Room 6A), Performed by (Sundt), Unit Type (EA), From (Contractor), To (Government), Unit Cost (1.21), Total Units (6,000.00), Type (Spare Parts), Transferred Units, and Remaining Units.
- Callouts:**
 - A red arrow points from the "Add" button in the main window to the "Transfer No" field in the dialog.
 - A red arrow points from the "Description" section in the sidebar to the "Description" field in the dialog.
 - A yellow box highlights the "From: WHO will transfer the property." and "To: WHO will receive the property." fields in the dialog.

From: WHO will transfer the property.

To: WHO will receive the property.

Use the lookup to select the specification section, enter the paragraph number and use the lookup to link the **Transfer Property** to the Contractor Pay Activity.

Indicate the number of days before or after the activity begins that the property is required to be transferred. (A “+” will occur **AFTER** activity start and a “–“ will occur **PRIOR** to the activity starting.)

The remaining cells are self-explanatory. The right side of the screen, relating to the Transfer of the Property, will be complete during preparation of the QC Daily Report when the actual transfer takes place.

Reports for Planning



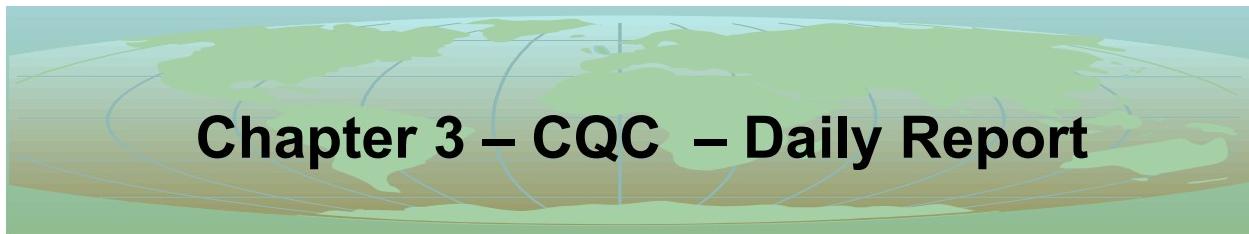
This module is still under construction.

Listing reports of each type of QC Requirement discussed above will be available when this module is completed. In addition, Planning Worksheets (both blank and data filled) will also be included.

The screenshot displays two windows of the Quality Control System:

- Report Menu** window (top left):
 - Buttons: Contract, Library, Close.
 - Menu bar: Report Menu.
 - Contract Reports section:
 - [Administration](#)
 - [Finances](#)
 - [Quality Control](#) (highlighted in blue)
 - [Submittals](#)
 - [Schedules](#)
 - Quality Control section:
 - Icon: Printer.
 - Links: QC Daily Report, 3 Phase Schedule, 3 Phase Inspection Checklists, Punch List Report, QC Requirement List.
- 3 Phase Schedule** window (bottom right):
 - Buttons: Preview, Print, Close.
 - Title: **QC Requirements List**.
 - Image: Printer icon.
 - Text: Range QC Tests.
 - Range selection:
 - Range button.
 - Radio buttons: QC Tests, User Schools, Installed Property, Transfer Property.

Currently, under “QC Requirements List”, there are reports available for **QC Tests**, **User Schools** and **Installed Property**.
Transfer Property is not yet completed.



Chapter 3 – CQC – Daily Report

What you will learn from this Chapter:



Quality Control Report and QCS

- QC Report Date
- Weather
- QC Narratives
- Punch List Items Listed by QC
- Punch List Items Listed by QA
- User Schooling
- QC Testing
- Transfer Property
- Installed Property
- Prep/Initial Inspections
- Activities Started/Finish
- Contractor's on Site
- Labor / Equipment Hours
- Accident Reporting

Contractor Quality Control – Daily Report

Overview



This chapter furnishes information on the **Contractor Quality Control Report** and provides instructions for utilizing the **Quality Control Report** modules of the QCS program.

As a contract progresses, daily reports are made by both the contractor and the government. These reports include activities started and completed, inspections made, QC requirements met, problems encountered and a variety of other information. The Daily QC Report option provides a place to enter all that data.

Obtaining quality construction is a combined responsibility of the construction contractor and the government. Their mutual goal must be a quality product conforming to the contract requirements. A cooperative and professional working relationship should be established in order to realize this common goal. The contract documents establish the quality required in a project to be constructed.



The Government requires the Contractor to create a Contractor Quality Control Plan, tailored for their contract, to outline how Quality Control will be managed on this particular contract. While Quality Assurance (QA) in RMS provides the vehicle by which the Government can create a daily report and monitor the Contractor's actions and records, it is Quality Control (QC) within QCS that provides the Contractor a means to create daily reports and to maintain contract records.

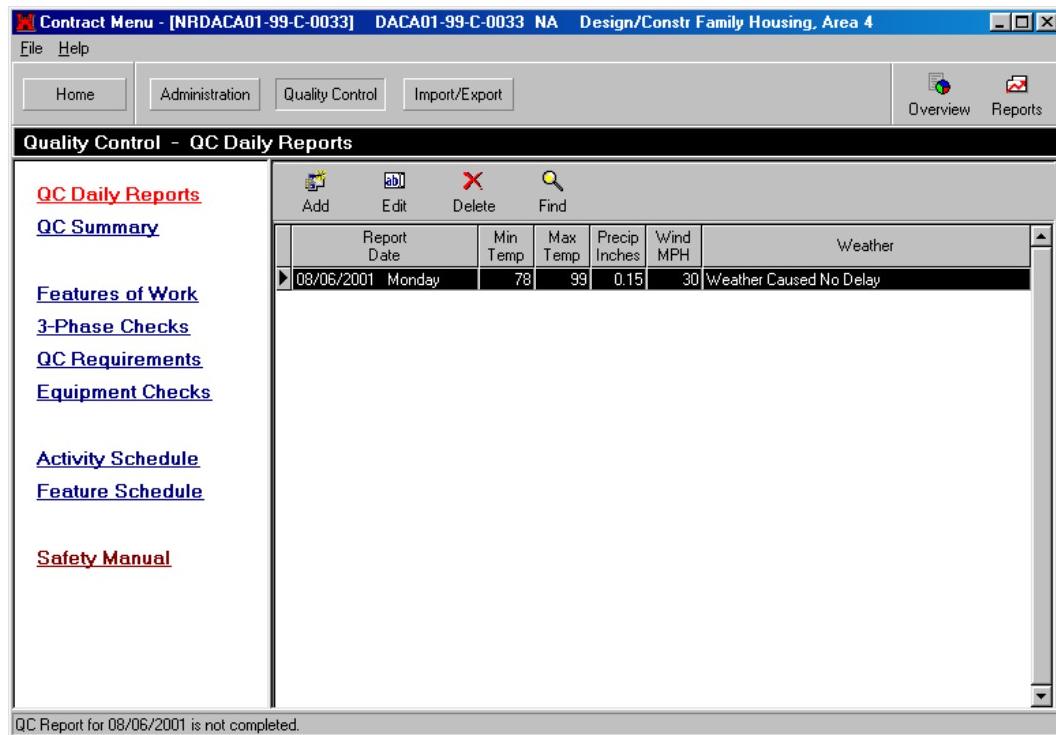
Much of the data entered by the Contractor is interdependent with other options throughout RMS. Special attention should be placed on **Prep/Initial Dates**, **Activity Start/Finish**, **User School**, **QC Testing**, **Transfer Property**, **Installed Property**, **Punch List Items** and **Contractor's On-Site** options as they are linked to other vital functions of the RMS program.

Daily Quality Control Report

Selecting the **QC Daily Reports** option lets you enter data for that day only. The date is automatically entered on each screen and you will see only outstanding or incomplete tests, inspections, activities, etc., for that particular date. This makes it quite easy to find a particular item. Selecting the **QC Summary** option will place you in a **Read Only** mode, but you will be able to review all items for all dates entered.

Quality Control System

Select **Quality Control**. The dates shown reflect the **QC Daily Report** date, and represent each report that has been entered. You would push the **Add** button to enter a new report, or the **Edit** button to select an existing report.

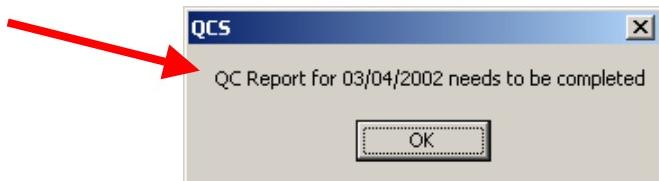


QC Report Date

Push the **Add** button and a popup calendar will appear. You can then select a date for the report you wish to create.

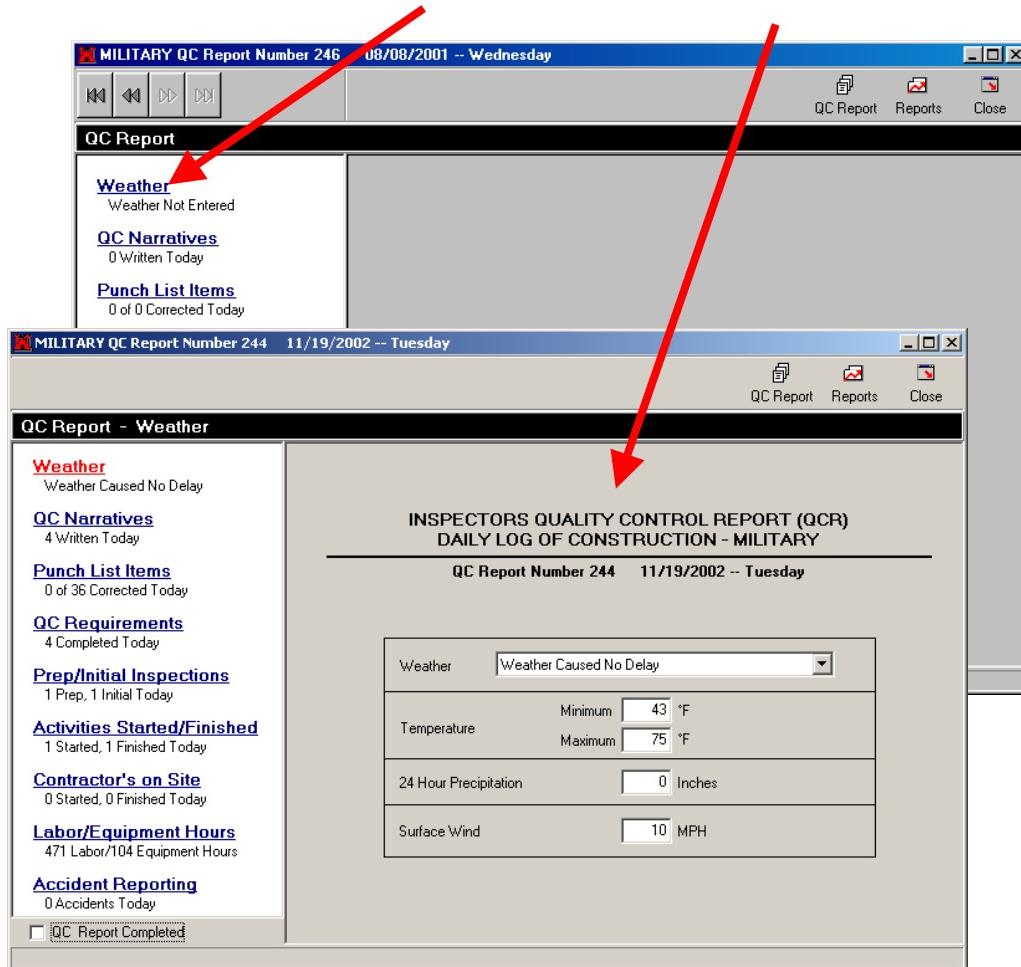


If you have not “marked as completed” a prior report, you will first see this popup screen.



Entering Weather Data

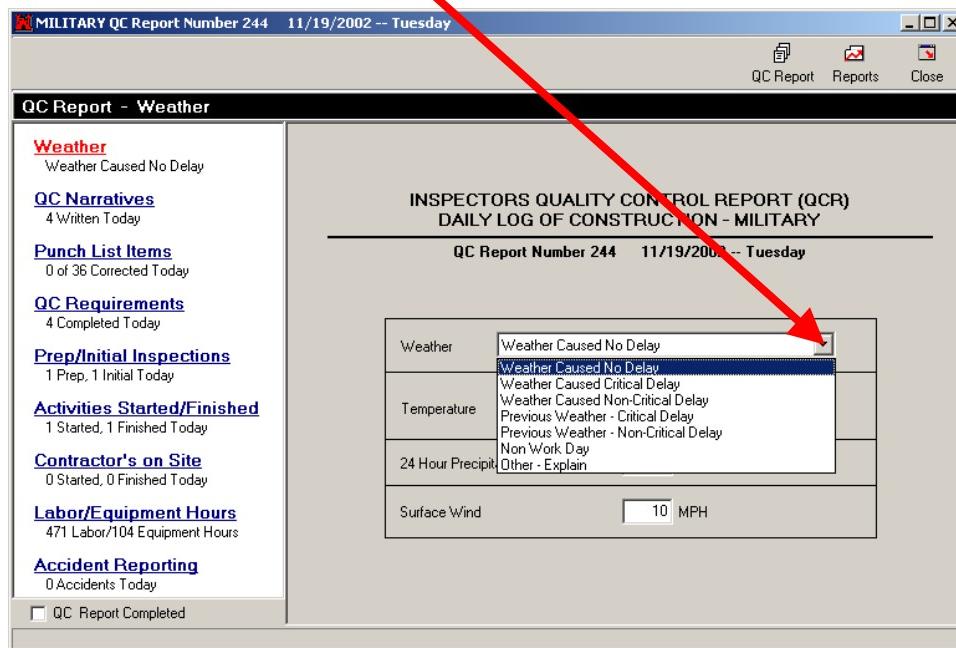
Highlight the first selection, **Weather**, to begin preparing the **QC Daily Report** (QCR). The screen will change and provide the fields for the weather information.



1. The **Report Number** and **Date** are automatically reflected based upon the date just selected. (The report number reflects the day of the contract from the Notice-To-Proceed date (NTP)).

Quality Control System

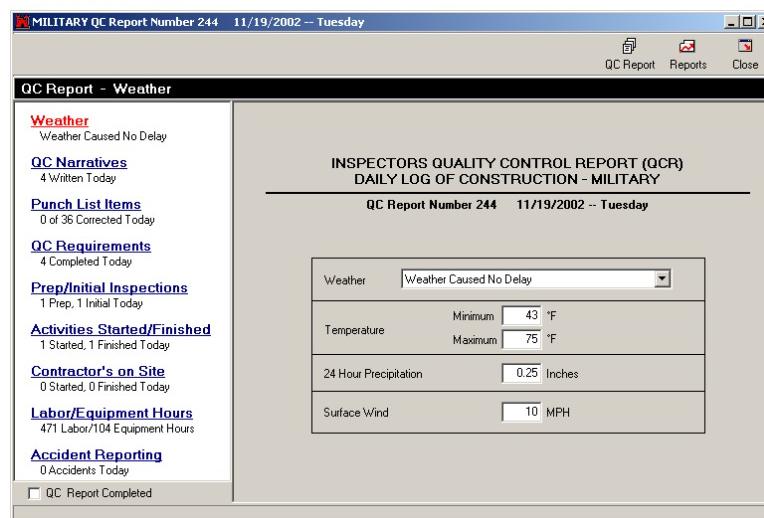
2. Use the mouse to access the Weather drop-down menu and select the appropriate description for the weather.



3. Record the minimum and maximum temperatures for the shift worked and the amount, if any, of precipitation and wind that occurred.

Note: Weather delays occur when more than 50% of the workday (24 hour period) is unsuitable for the work in progress.

In addition, severe weather, such as rain, may impact the days following the actual weather occurrence.



Notice that this screen reflects US units. The Government system, RMS, affords the option of either US Units or Metric Units.

Possible choices for weather:

- Weather caused No Delay
- Weather caused Critical Delay
- Weather caused Non-critical Delay
- Previous Weather caused Critical Delay
- Previous Weather caused Non-critical Delay
- Non-Work Day
- Other - Explain

MILITARY QC Report Number 244 11/19/2002 -- Tuesday

QC Report - QC Narratives		
<input type="button" value="Add"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/> <input type="button" value="Find"/>		
Report Date	QC Narrative Title	Comments
11/19/2002	Activities in Progress:	(Memo)
11/19/2002	Safety Comments and Corrective Action taken:	(Memo)
11/19/2002	General Comments:	(Memo)
11/19/2002	Meeting Held Today:	(Memo)

Weather
Weather Caused No Delay

QC Narratives
4 Written Today

Punch List Items
0 of 36 Corrected Today

QC Requirements
4 Completed Today

Prep/Initial Inspections
1 Prep, 1 Initial Today

Activities Started/Finished
1 Started, 1 Finished Today

Contractor's on Site
0 Started, 0 Finished Today

Labor/Equipment Hours
471 Labor/104 Equipment Hours

Accident Reporting
0 Accidents Today

QC Report Completed

When completed entering **Weather** data, highlight **QC Narratives** to begin preparing the remainder of the QC Report.

QC Narratives

The **QC Narrative** provides the Contractor with a variety of topics in which to record the days' activities. When you add a narrative, a **Lookup** provides you with several topics from which to choose. These topics are simply the *headings* that are printed on the report form for each narrative or group of narratives. If a Contractor desires an additional *heading*, other than those shown, the Government must first add the desired *heading* in the Government's main RMS program.

A narrative is a paragraph, or Memo field for each individual narrative. QCS can accept an unlimited number of narratives for a particular day. The paragraphs may contain your observations and comments, such as: Verbal Instructions given by the Government, Activities in Progress, and so forth. The information is simple text and it may be spell checked and imported or exported to/from other Word Processing programs. The data cannot be directly sorted, compared or extracted to a database (you would use another software package for this.)

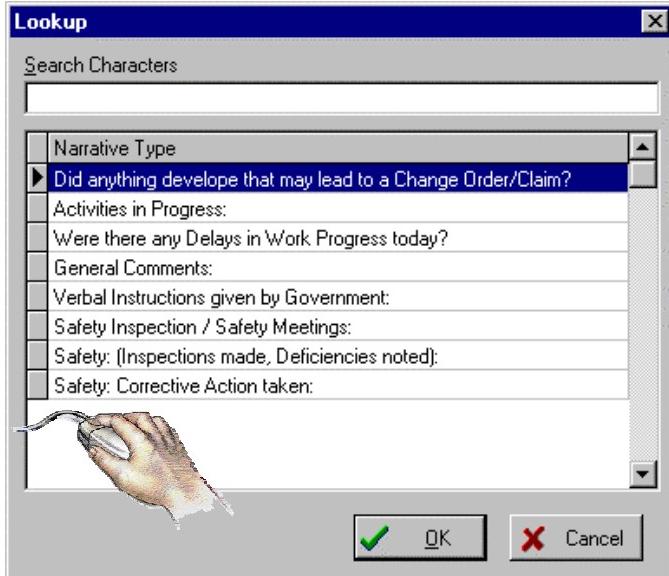
When completed with the weather, click on the **QC Narrative** selection on the left of the screen.

Your first choice from the popup menu will be to either add a narrative manually or to copy from a previous report day.

Selecting the **Add a Narrative Manually** provides this lookup of **Narrative Types** within the program.

Place the cursor on the desired **Narrative Type** and push the **OK** button.

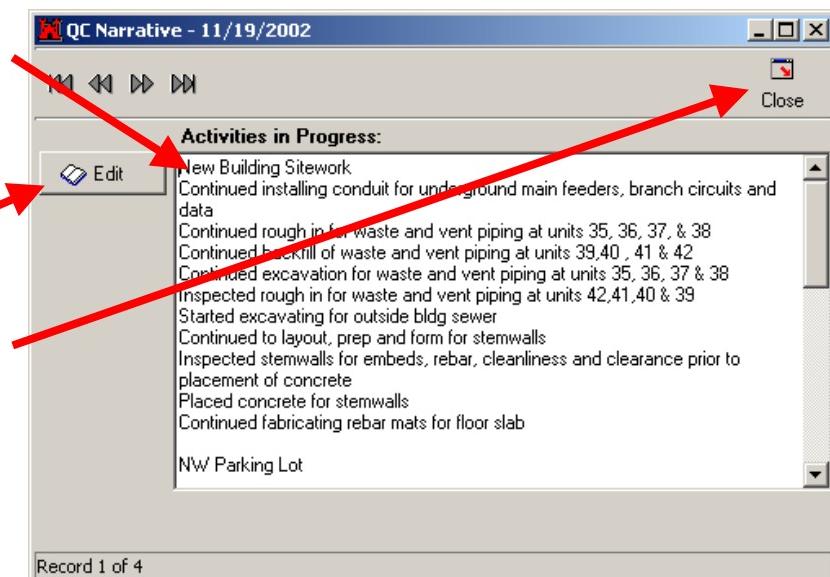
Or, double mouse-click the desired **Narrative Type**.



Enter comments relative to the selected **Narrative Type** here.

You can use a larger screen, use **Spell Check**, **Cut and Paste**, etc., by pushing the **Edit** button.

Push the **CLOSE** button in the upper right-hand corner of the screen. You may then enter additional narratives, or continue with other portions or sections of the *QC Daily Report*.

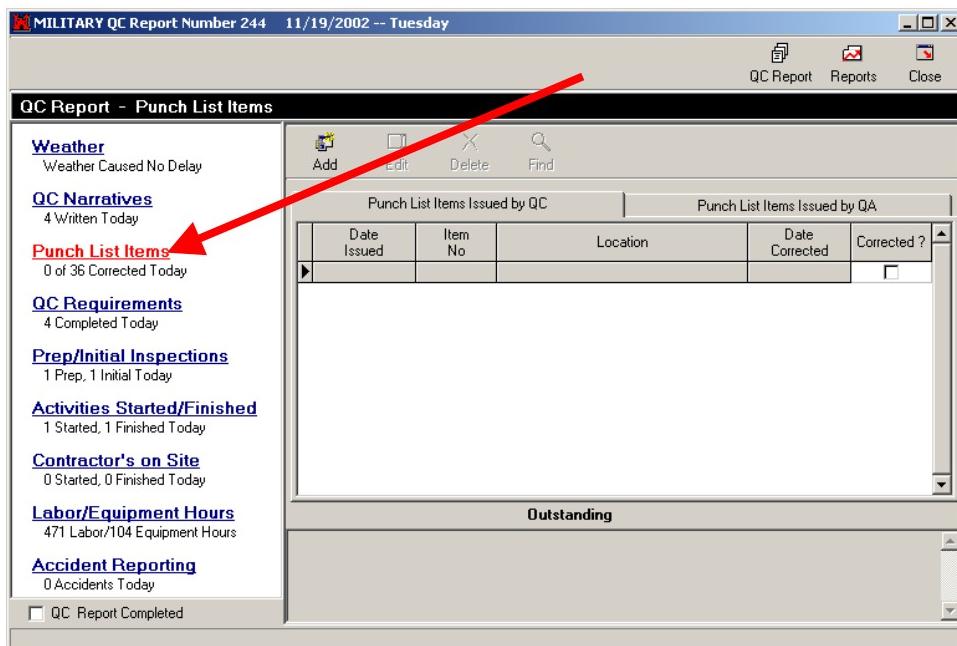


Note: If you choose to copy narratives from a previous day, a pop-up calendar will appear. You select the day and QCS will copy all the narratives for that particular day into the current report. You could then modify, delete or even add new narratives as required. Once you add a narrative manually, you will not be able to copy narratives from a previous day on that day's report.



Punch List Items (aka Deficiency Tracking System)

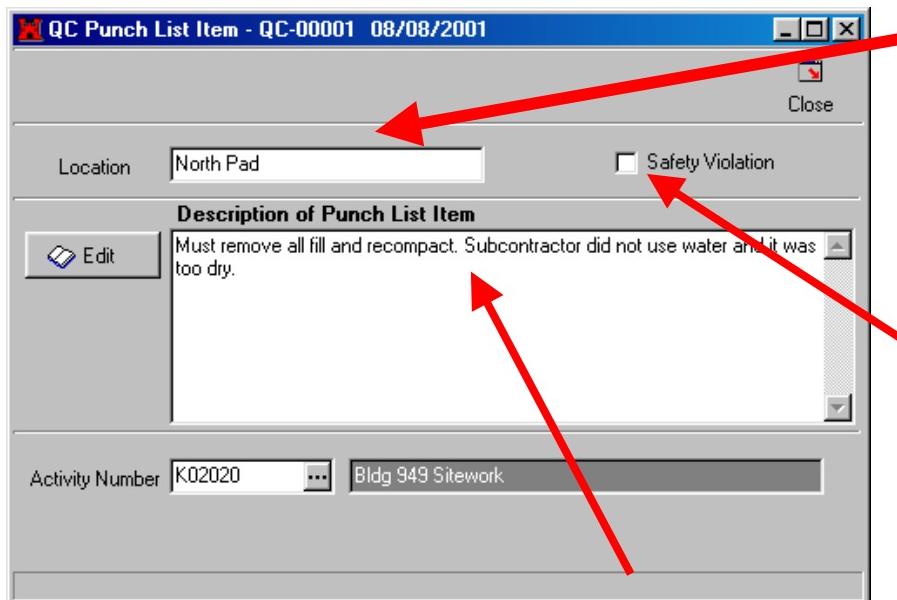
The **Punch List Items** module gives the Contractor a means to communicate to the Government comments resulting from an inspection, site visit, or various other reviews. This communication is a record keeping system, also referred to as a Deficiency Tracking System. By using the **Punch List Items** function in QCS, the Contractor can keep track of items that may otherwise be overlooked.



This screen has two tabs. The left tab is a listing of the **Punch List Items issued by the QC Staff** and the right tab is a recap of the **Punch List items issued by the Government (QA)**.

Push the **ADD** button to add a QC Punch List Item.

Punch List Items Issued by QC



1. Enter the **Location** to allow reports to print a punch list (*sorted by Location*) for later verification and inspection.
2. Indicate whether or not the comment is a **Safety Violation** by placing a check in the box.

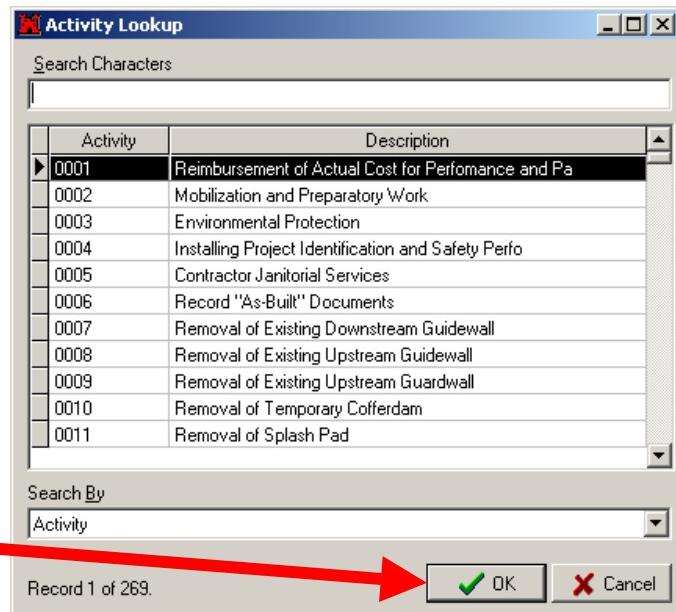
3. Enter the *Description of the Punch List Item* in the Memo Field.

A very powerful feature of QCS is how the Contractors' tasks are linked to Pay Activities. **Punch List Items** are one of those links.

We should always link a **Punch List Item** to the specific *Pay Activity* it is related to.

Use the lookup to access the **Activity Number** and complete the link.

Close the window when completed by pushing the **OK** button, and then close the next window.

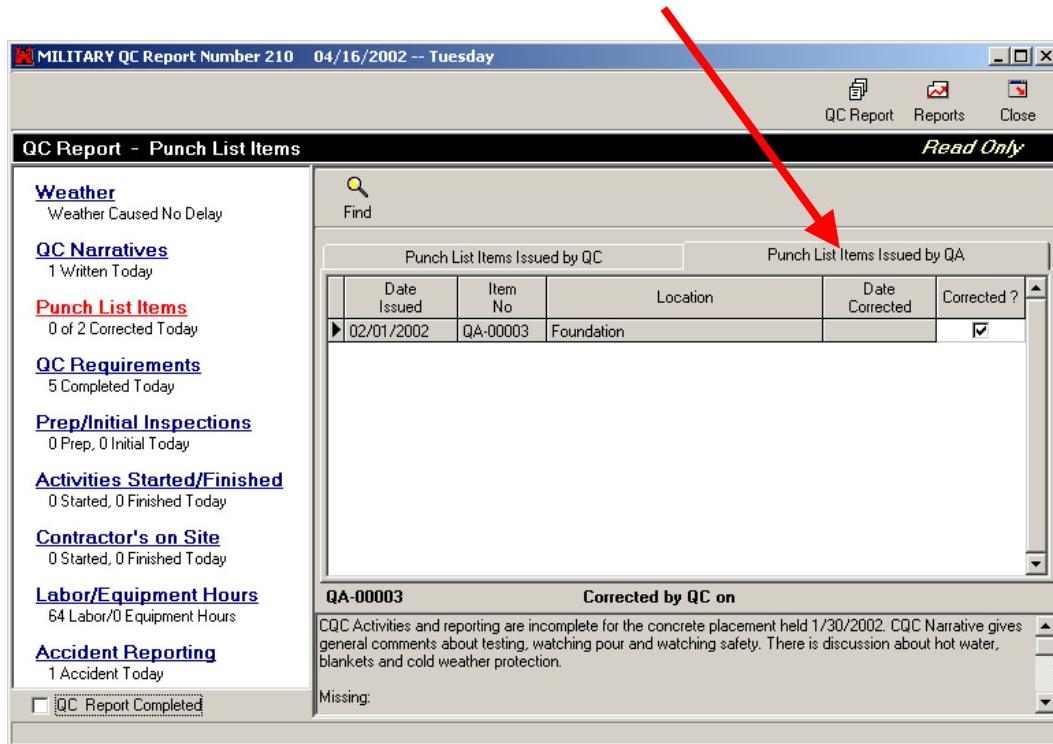


You can use the **Search** feature (top of window) and find the item you want by searching for the Activity number or description (bottom of the window).

Punch List Items Issued by QA

QA Punch List Items gives the Government a means to communicate to the Contractor comments resulting from an inspection, site visit, or various other reviews. Using the **Punch List Items** function in RMS, the Government can draw the Contractor's attention to an overlooked item, faulty workmanship or job site conditions, to name a few. As the comment is issued as an action item, the comment is placed on a QC list to be corrected by the Contractor, reported corrected by the Contractor, and then verified by the Government. For the Contractor, the list will be found under the **Punch List Items Issued by QA** tab. The Government can then track the action until it is reported completed and the Government concurs that the action is completed satisfactorily.

With the **Tab** entitled **Punch List Items Issued by QA** selected, a complete listing of all Government QA Punch List Items is presented. The description of the comment is displayed in the lower portion of the screen as you scroll through them.



When the **QA Punch List Item** has been corrected, or otherwise adequately addressed, simply place a checkmark in the **Corrected?** box. QCS will automatically enter the date corrected.

When completed with the **Punch List Items** selection, highlight the **QC Requirements** selection to proceed to the next step.

QC Requirements

Contract documents may require the Contractor to conduct training for the Customer on systems or equipment (**User Schools**), perform various test on materials, equipment, systems, etc., (**QC Tests**), account for property that is Government Furnished or will be turned-over to the Government as unincorporated property (**Transfer Property**), or provide information for maintenance or repair on equipment installed as part of the contract (**Installed Property**).

QCS titles this group of actions or contract requirements as **QC Requirements**.

These screens function in the same fashion as the previously discussed **QA Punch List Items** screen. That is, the Contractor simply places a checkmark in the **Completed?** box when the action is completed. You are also required to record the **Results** of the test. Like the **QA Punch List Items**, the date field will be automatically populated and the full **Description** can be viewed at the bottom of the window as you scroll through the items.

QC Test	Description	Date Completed	Completed ?	Results
CT-00004	Sampling and Testing-Graded Crushed-Ag		<input type="checkbox"/>	
CT-00005	Sampling and Testing-Hot Mix Asphalt		<input type="checkbox"/>	
CT-00006	Sampling and Testing-Pavement Markings		<input type="checkbox"/>	
CT-00007	Field Quality Control-Concrete Side Walks		<input type="checkbox"/>	
CT-00008	Soil Test-Seeding		<input type="checkbox"/>	
CT-00009	Soil Test and Percolation Test-Tree, Shrub		<input type="checkbox"/>	
CT-00010	Sampling and Testing-Cast in Place Structural		<input type="checkbox"/>	
CT-00011	Efflorescence Test, Field Testing of Mortar		<input type="checkbox"/>	
CT-00012	Test Report for Uplift Resistance -Metal Roofing		<input type="checkbox"/>	
CT-00013	UL Test Assembly and Field Test-Fire Protection		<input type="checkbox"/>	
CT-00014	Testing-Ceramic Tile		<input type="checkbox"/>	

Description **Outstanding** Section: 02722 Paragraph: 1.8
Sampling and Testing-Graded Crushed Aggregate Base Course

QC Report Completed

QC Tests

The **QC Tests** Tab option is the entry point for completion of one of the individual tests conducted by the Contractor. This information is then available for verification by the Government if necessary. The listing of the QC Tests should be in agreement with the CQC Plan. After you indicate it is completed, you will need to indicate if the test "passed", "failed", or is "awaiting results". If the test is marked as "failed" you will be given the opportunity to add a follow-up test to take its place (It will be indicated as a RETEST).

User Schools

In this Tab option you will enter the completion of the individual User Schools that are listed. This information is then available for verification by the Government if necessary.

During the planning stages of the contract, each **User School** (the may be called "Training" or "Instructions") should have been entered as required by the specifications or drawings of the contract.

The screenshot shows a Windows application window titled "MILITARY QC Report Number 210 04/16/2002 -- Tuesday". The main title bar has icons for minimize, maximize, and close. Below the title bar is a menu bar with "QC Report", "Reports", and "Close". The main window is titled "QC Report - QC Requirements". On the left, there is a sidebar with various status links: Weather (Weather Not Entered), QC Narratives (1 Written Today), Punch List Items (0 of 1 Corrected Today), QC Requirements (2 Completed Today), Prep/Initial Inspections (0 Prep, 0 Initial Today), Activities Started/Finished (0 Started, 0 Finished Today), Contractor's on Site (0 Started, 0 Finished Today), Labor/Equipment Hours (0 Labor/0 Equipment Hours), and Accident Reporting (0 Accidents Today). At the bottom of the sidebar is a checkbox for "QC Report Completed". The main area contains a table with four columns: "User School", "Description", "Date Completed", and "Completed?". The table has five rows:

User School	Description	Date Completed	Completed?
US-00001	Fire System Training		<input type="checkbox"/>
US-00002	HVAC Training	04/16/2002	<input checked="" type="checkbox"/>
US-00003	Diesel-Gen. Set/Stanby 100-2500 Kw/Aux Training		<input type="checkbox"/>
US-00004	Cathodic Protection System	04/16/2002	<input checked="" type="checkbox"/>

Below the table is a section titled "Description Outstanding" with the text "Cathodic Protection System". Above this section is the text "Section:13110 Paragraph:3.6". A large red arrow points from the text "Simply check the definitive box as the school or training has been completed." to the "Completed?" column for User School US-00004.

Simply check the definitive box as the school or training has been completed.

Installed Property

The **Installed Property** item is the point of entry for the Contractor to indicate that the items identified have been installed. The Government QA Representative will normally verify that this is accomplished for selected or high-interest items. This is normally accomplished at the end of the contract or when a portion of the contract is turned over to the Occupant.

MILITARY QC Report Number 210 04/16/2002 -- Tuesday

QC Report - QC Requirements

Add	Edit	Delete	Find
QC Tests	User Schools	Installed Property	Transfer Property
IP-00001	Panty Hose Dispenser	04/16/2002	<input checked="" type="checkbox"/>
IP-00002	Electrical Panelboard EH-1		<input type="checkbox"/>

QC Installed Property

Installed No	IP-00001	Required for Activity	02310
Section	00600	Requirement Lag/Lead	(days)
Paragraph	6	Location	Mech Yard
Performed by	Sundt	Unit Type	EA
		Unit Cost	1200

Description, ID, Manufacturer, Model, Serial Number

Edit	Pump P-1
----------------------	----------

Capacity, BTU, CFM, KVA, HP, Volts, PH, AMPS, etc.

Edit	200 gpm, 25HP, 480-v, 3-ph
----------------------	----------------------------

hen all information
n the **Installed
Property** has been
ovided, and has
een installed, check
e definitive box to so
cide on the QCR.

When all information on the **Installed Property** has been provided, and has been installed, check the definitive box to so indicate on the QCR.

NOTE: This screen is also available when pushing the Edit button for each item.

Transfer Property

Similar to the above Tab options, the **Transfer Property** item is the point of entry for the Contractor to indicate that the items identified for transfer have taken place. After the Contractor has made the appropriate entry indicating a property item has been transferred in full, it should then be verified by the Government and a *DD Form 1149* prepared for the official record of the transfer. Normally this is also completed at the end of the contract or at the time a portion of the contract is turned over to the Occupant.

The screenshot displays two windows from the Quality Control System:

- QC Report - QC Requirements**: This window shows various status metrics and a table of transferred items. The table includes columns for Transfer Property, Description, Date Completed, and Completed? (with checkboxes). Three items are listed:

Transfer Property	Description	Date Completed	Completed?
TP-00001	Spare Ceiling Tiles	04/16/2002	<input type="checkbox"/>
TP-00002	Spare Floor Tiles	04/16/2002	<input checked="" type="checkbox"/>
TP-00003	Building Key and Cabinet	04/16/2002	<input checked="" type="checkbox"/>
- QC Transfer Property**: This window provides detailed information for each transferred item. For Transfer No TP-00001, the fields include:

Transfer No	TP-00001	Required for Activity	09300
Section	09310	Requirement Lag/Lead	150 (days)
Paragraph	8	Location	Room 6A
Performed by	Sundt	Unit Type	EA
From	Contractor	Unit Cost	1.21
To	Government	Total Units	6000
Type	Spare Parts	Transferred Units	6000
		Remaining Units	0

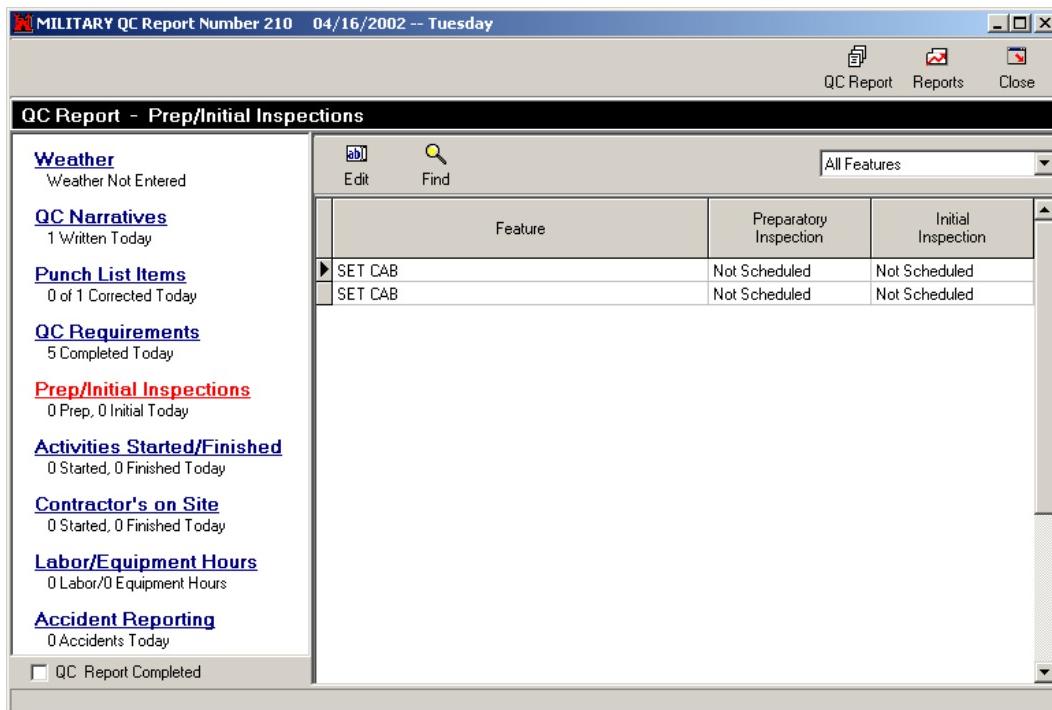
 A description field below states: "Spare ceramic tile pieces to be used in Resident Engineer's new house in Rocky Point, Mexico".

When all information on the **Transfer Property** has been provided, has been transferred, check the definitive box to so indicate on the QCR. This would be done after the *Remaining Units* field shows a "ZERO" balance.

NOTE: This screen is also available when pushing the Edit button for each item.

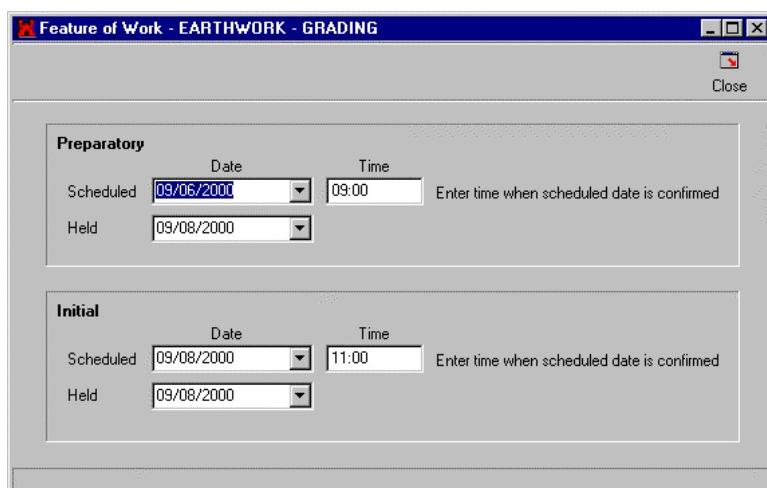
Prep/Initial Inspections

In this window the Prep and Initial Inspection data process begins. This part of the QC Daily Report is simply required to document the dates and times of these required Inspections for the numerous Features of Work addressed in the Contract and in the CQC Plan.



Prep / Initial Inspections Window

1. The **Feature** is automatically populated with the information supplied in the Quality Control area, **Features of Work** option.
2. Select the **EDIT** button to enter dates and times.
3. Each feature will be listed with fields for the dates and times of the preparatory and initial inspections. Enter in the *Prep Scheduled date* and *Prep Time*, and then the *Prep Held date* (**Actual Date of Preparatory Inspection**), for the preparatory inspection. Repeat the process for the *Initial Scheduled*, *Initial Held Dates* and *Initial Time* fields.



Activities Started/Finished

Recording the start and finish dates of an activity takes place in this menu option item.

The dates will not be overwritten by the Contractor's NAS import. These dates are considered the "official" dates as they are entered as they occur, as observed on-site by the QC Manager. The dates are extremely important and must be entered as they occur.

Activities Started / Finished Window

MILITARY QC Report Number 210 04/16/2002 -- Tuesday

QC Report - Activities Started/Finished

Activity ID	Description	Actual Start	Actual Finish
AD01003	LEAD ABATEMENT EXISTING TOWER		
AD01005	ASBESTOS ABATEMENT EXISTING TO		
AD01007	OWNER RELOCATE FROM EXISTING T		
AD01009	DEMO EXISTING TOWER		
AD01011	DEMobilize		
CR01003	INSTAL LIGHTNING PROTECTION PH		
CR01005	SINGLE PLY ROOF SYSTEM		
CR01007	ROOF HATCH/LADDER		
CR01009	LINEAR METAL SOFFIT		
CR01011	INSTALL ROOF DRAINS		
CR01013	EXTERIOR SOFFIT PANELS		
CR01015	PARAPET CAP FLASHING		
CT01025	P/F SECOND 1/2 OF FOUNDATION	02/28/2007	
CT01027	PULL OUT TEST FOR ROCK BOLTS		
CT01029	BACKFILL TOWER FOUNDATION		
CT01031	GROUT POOLS		
CT01033	FIRST FLOOR REBAR		
CT01035	F/P/F FIRST FLOOR SLAB		
CT01037	ERECT STRUCTURAL STEEL		

Weather
Weather Not Entered

QC Narratives
1 Written Today

Punch List Items
0 of 1 Corrected Today

QC Requirements
5 Completed Today

Prep/Initial Inspections
0 Prep, 0 Initial Today

Activities Started/Finished
0 Started, 0 Finished Today

Contractor's on Site
0 Started, 0 Finished Today

Labor/Equipment Hours
0 Labor/0 Equipment Hours

Accident Reporting
0 Accidents Today

QC Report Completed

This listing can be filtered by one of the following choices:

- a. Activities Not Previously Finished
- b. Activities Started or Finished Today
- c. Activities in Progress
- d. Activities Not Started
- e. Activities Not Finished

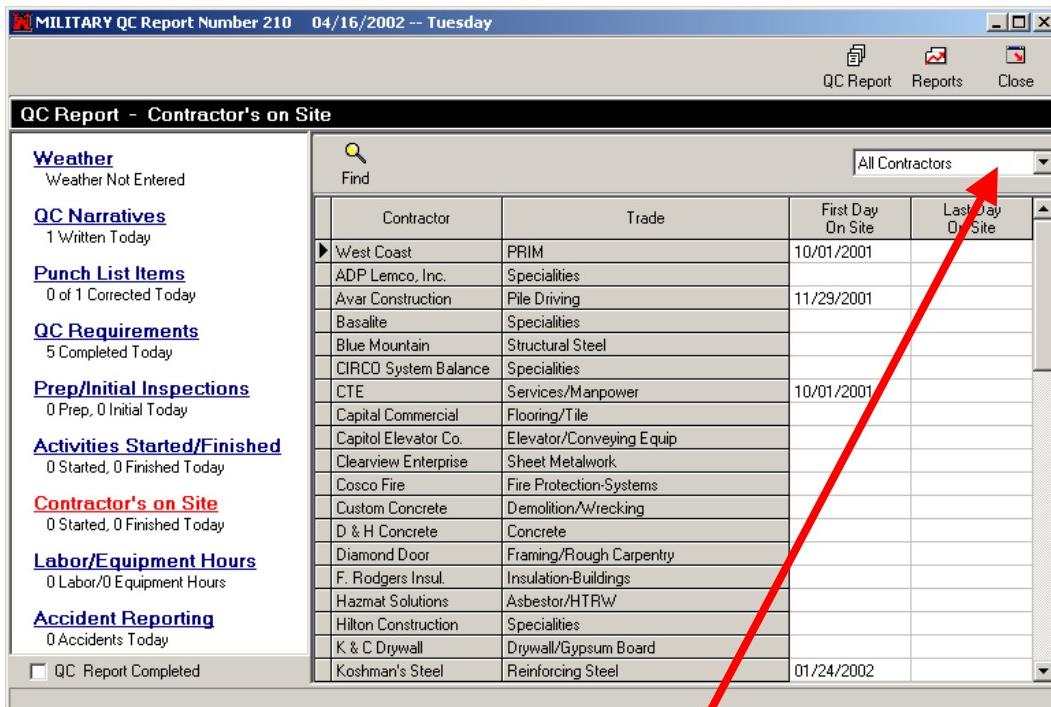
1. The **Activity ID** and **Description** fields are automatically populated with information entered in the **Administration / Pay Activities**, menu option.
2. Enter the applicable **Activity Start** and **Activity Finish** dates. You can use the calendar lookup that appears when you click on either field, and choose the date, or you can type the date in manually.

Contractors on Site

The names and trades of the prime contractor and all subcontractors are carried over from the **Administration / Subcontractors** menu options. By updating the first and last dates each of the listed contractors are on the job site, the contractors insurance and payrolls can be tracked.

As each pay activity is attached to single subcontractor, expired insurance and problem payrolls will appear on the pay request worksheet for activities on which payment is requested.

Contractor's On Site Window



The screenshot shows a Windows application window titled "MILITARY QC Report Number 210 04/16/2002 -- Tuesday". The main title bar has icons for minimize, maximize, and close. Below the title bar is a menu bar with "QC Report", "Reports", and "Close". The main area is titled "QC Report - Contractor's on Site". On the left is a sidebar with links: Weather (Weather Not Entered), QC Narratives (1 Written Today), Punch List Items (0 of 1 Corrected Today), QC Requirements (5 Completed Today), Prep/Initial Inspections (0 Prep, 0 Initial Today), Activities Started/Finished (0 Started, 0 Finished Today), Contractor's on Site (0 Started, 0 Finished Today), Labor/Equipment Hours (0 Labor/0 Equipment Hours), and Accident Reporting (0 Accidents Today). A checkbox at the bottom left is labeled "QC Report Completed". To the right is a table with columns: Contractor, Trade, First Day On Site, and Last Day On Site. A dropdown menu above the table is set to "All Contractors". A red arrow points from the text below to this dropdown menu.

Contractor	Trade	First Day On Site	Last Day On Site
West Coast	PRIM	10/01/2001	
ADP Lemco, Inc.	Specialties		
Aval Construction	Pile Driving	11/29/2001	
Basalite	Specialties		
Blue Mountain	Structural Steel		
CIRCO System Balance	Specialties		
CTE	Services/Manpower	10/01/2001	
Capital Commercial	Flooring/Tile		
Capitol Elevator Co.	Elevator/Conveying Equip		
Clearview Enterprise	Sheet Metalwork		
Cosco Fire	Fire Protection-Systems		
Custom Concrete	Demolition/Wrecking		
D & H Concrete	Concrete		
Diamond Door	Framing/Rough Carpentry		
F. Rodgers Insul.	Insulation-Buildings		
Hazmat Solutions	Asbestor/HTRW		
Hilton Construction	Specialties		
K & C Drywall	Drywall/Gypsum Board		
Koshman's Steel	Reinforcing Steel	01/24/2002	

This listing can be filtered by one of the following choices:

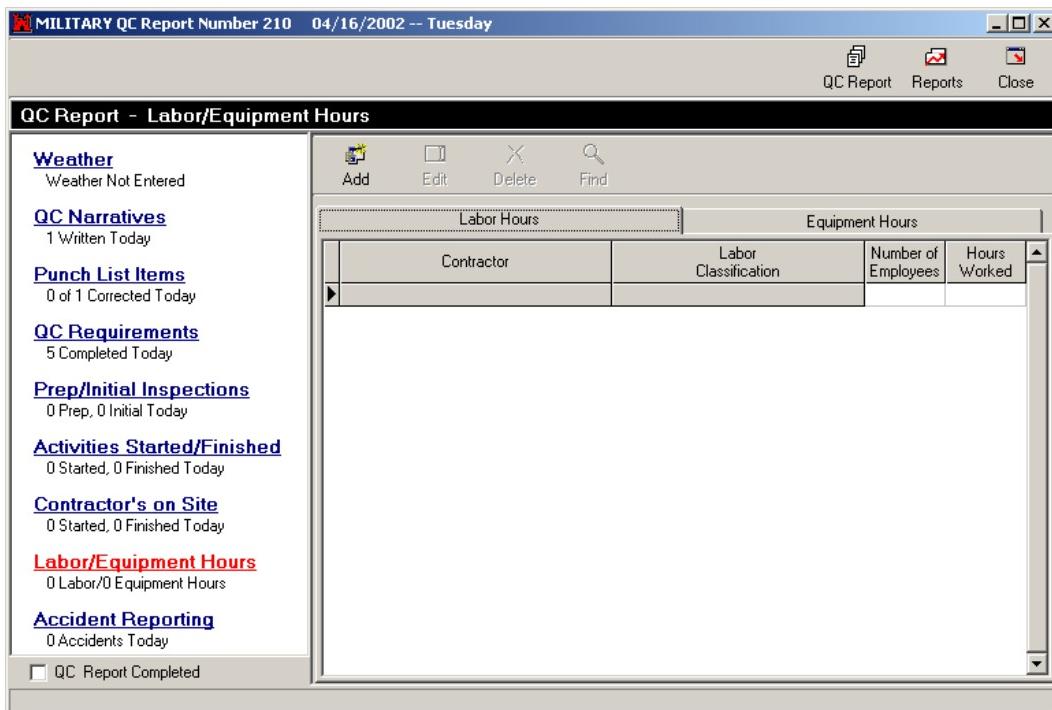
- a. All Contractors
- b. Contractors On Site
- c. Contractors Not On Site

1. The **Contractor** and **Trade** fields are automatically populated with information previously entered.
2. Enter the start date for each contractor listed in the **First Day On Site** field using the calendar lookup provided, or type in the date directly.
3. When applicable, enter the final date on location of each contractor listed in the **Last Day On Site** field in the same manner as above.

Labor Hours

In this option you can record the number of hours of work by each subcontractor and labor classification.

Labor Hours Window

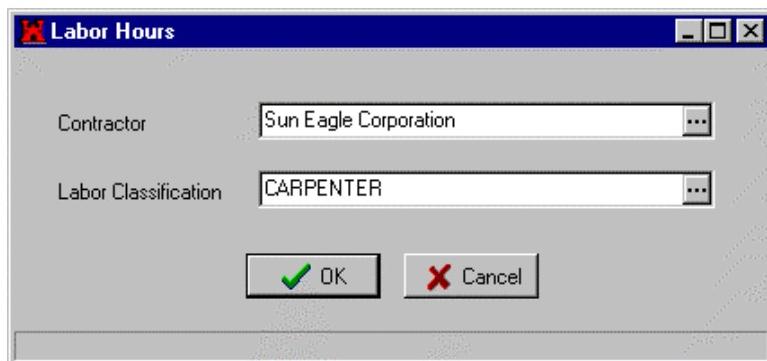


You begin by pushing the **Add** button. A drop down menu will appear and you will have the option to:

- Add Labor Hours Manually
- Copy A Previous Day

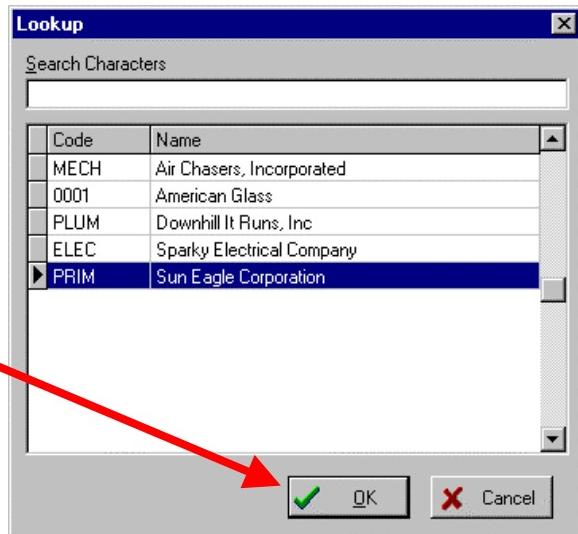
A window will appear and you will use the lookups to select the Contractor and the Labor Classification for which you are reporting.

After the selections have been made, push the **OK** buttons of each window.

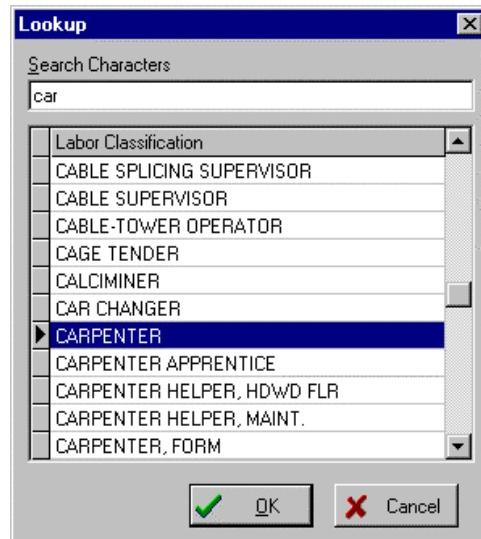


Contractor Lookup Window

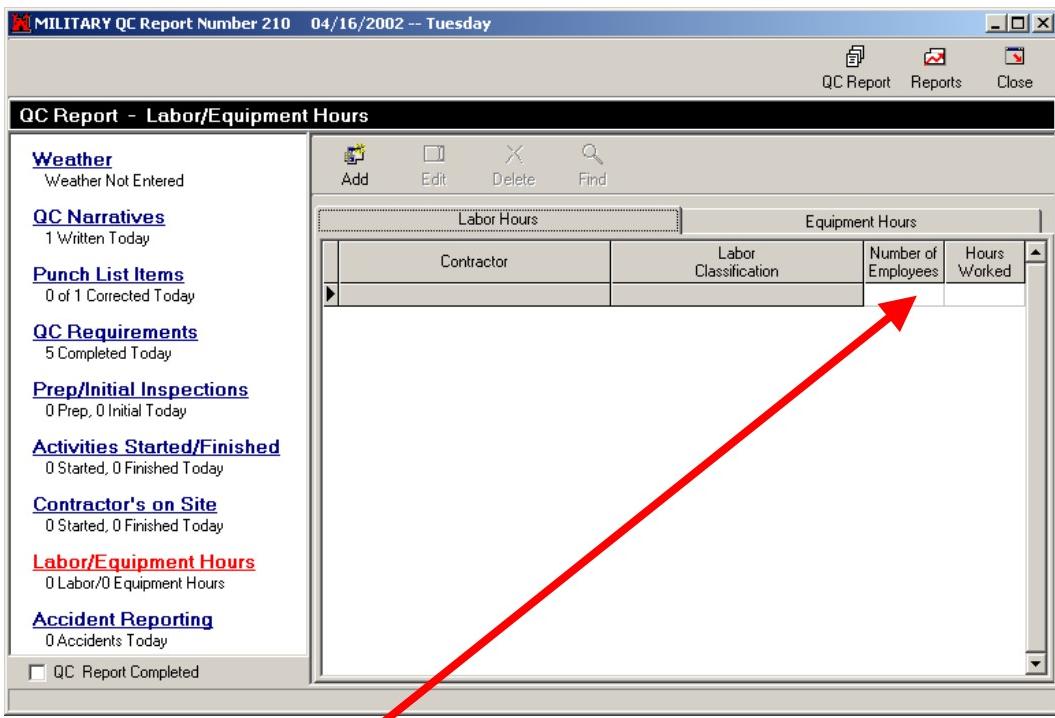
Select the appropriate contractor and push the **OK** button.

**Labor Classification Lookup Window**

Select the related labor classification for the QC Report and push the **OK** button when completed.



Note: If your contract includes Labor Classifications that are not listed, the Government must add the Classification in the program for you. It is the Prime Contractor's obligation to verify that all applicable classifications are included.



Enter **Number of Employees** and the **TOTAL Hours Worked** by all employees. For example, if you had six (6) employees and they each worked eight (8) hours, you would enter "6" and "48", respectively.

Repeat this process for all other *Labor Classifications* and *Contractors* on-site.

Copy a Previous Day

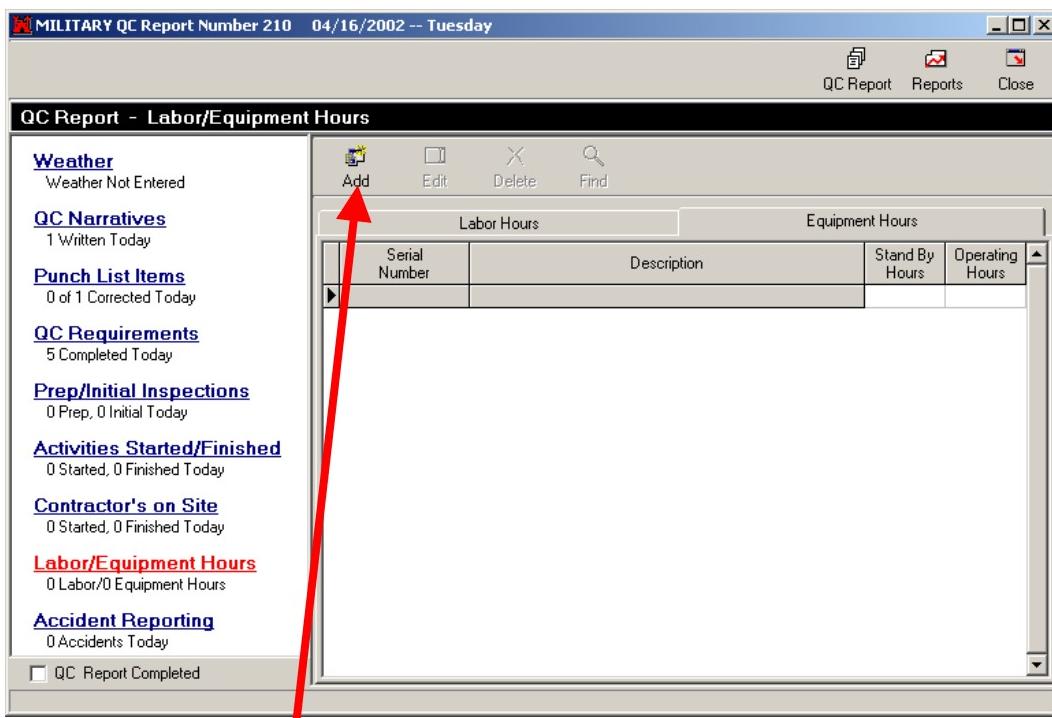
When this selection is made, you simply use the calendar lookup to select the previous report. QCS will automatically capture all entries from that previous report and you will be able to edit or delete particular entries if they do not apply for the report day.



Equipment Hours

This is where the contractor will record the hours used for all pieces of equipment on the contract. Equipment hours are entered and tracked in a similar fashion, as were the labor hours, except you make an entry for each individual piece of equipment.

Equipment Hours Window



You begin by pushing the **Add** button. If this is your first entry of the day, a drop down menu will appear and you will have the option to:

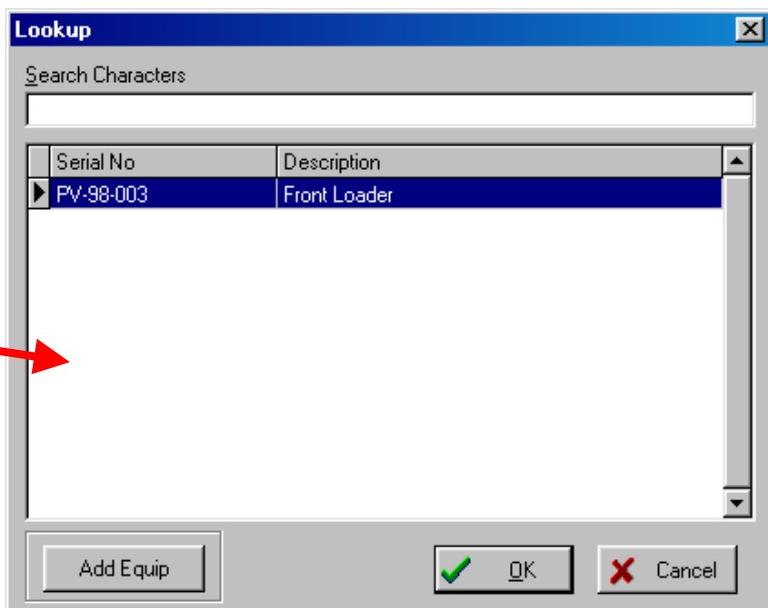
- a. Add Equipment Hours Manually
- b. Copy A Previous Day

Add Equipment Hours Manually

A window will appear and you will use the lookups to select the Equipment for which you are reporting.

If the desired piece of equipment is not present, use the button at the bottom left of the window and **Add Equipment** as necessary.

The **Standby Hours** and **Operating Hours** fields are self-explanatory. However, keep in mind that this refers to SHIFT hours, not the hours in a 24-hours day.



Copy A Previous Day

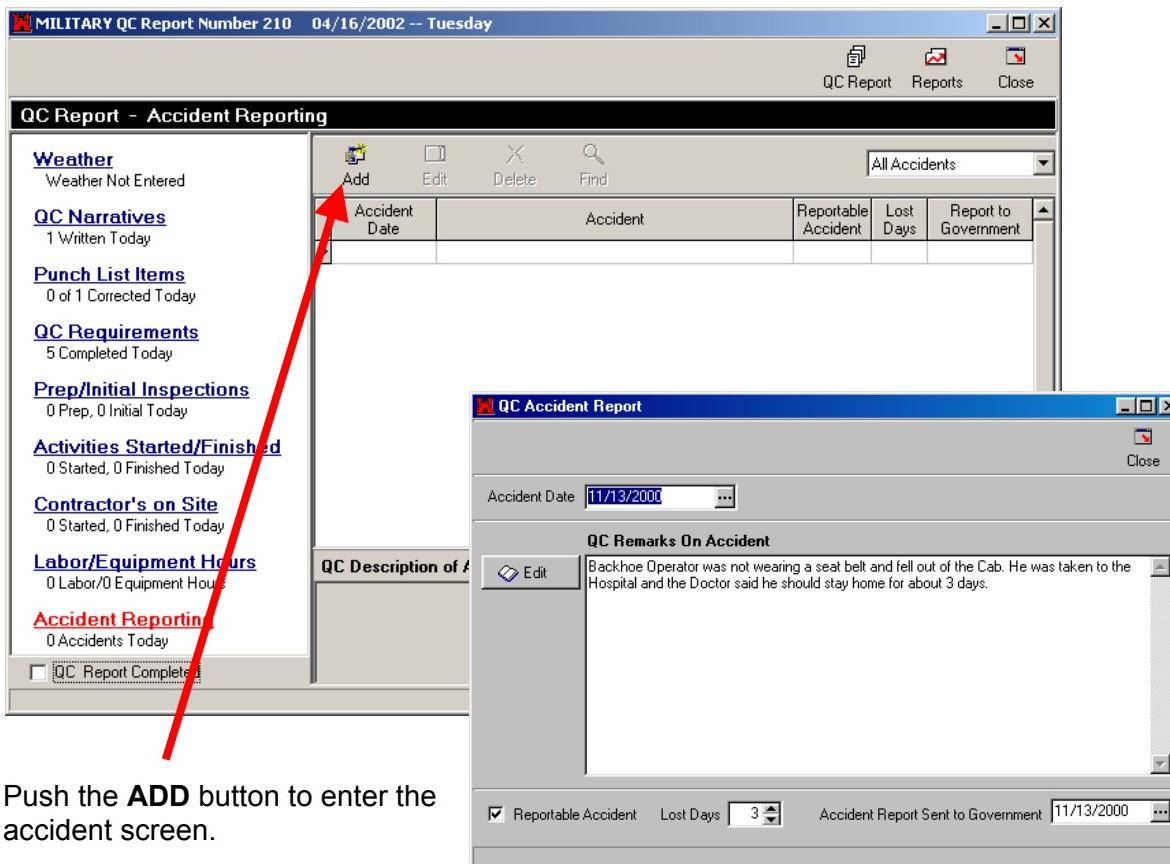
When this selection is made, you simply use the calendar lookup to select the previous report. QCS will automatically capture all entries from that previous report and you will be able to edit or delete particular entries if they do not apply for the report day.

The process is very similar to the Labor Hours previously discussed.

Accident Reporting

The contractor initiates the reporting of all Contractor accidents. The Contractor reports and records the accident in QCS through the **Quality Control Report** menu option. **(Note: this does not take the place of the Contractor completing the Accident Report Form (Eng Form 3394) that may be required by the contract.)**

Accident Reporting Window



Push the **ADD** button to enter the accident screen.

QCS will automatically populate the Accident Date field with the Report date, but it can be changed if needed.

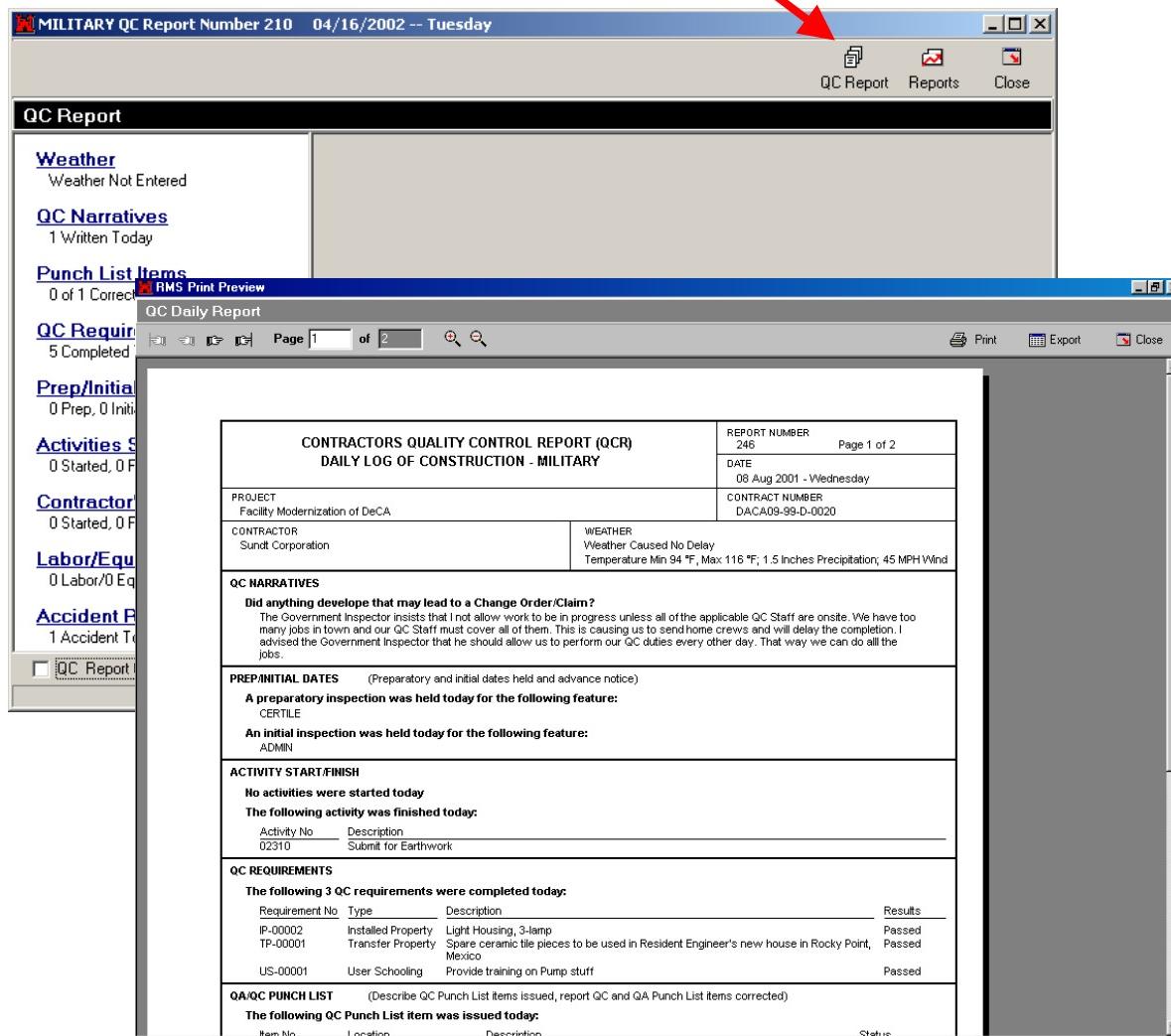
Enter a description of the Accident, indicate if it is a **Reportable Accident** and, if so, enter the number of lost days anticipated. By selecting **Edit**, a spell check feature is available.

Record the date on which the ENG Form 3394 Accident Report Form was sent to the Government documenting the accident.

Push the **Close** button to save all entries.

Quality Control Report Form

Now that all desired entries have been made, it is time to print the report and archive as a permanent document for the contract. Press the **QC Report** button from this screen to generate the report.



The report can be reviewed from this screen prior to printing. If changes are necessary, close this window and make the necessary changes. The report can also be exported in HTML or Word (doc) format. It can also be sent to a printer file.

When you complete the report and export to the Government, you will not be able to alter the report. It will be marked as "**Read Only**".

Quality Control System

CONTRACTORS QUALITY CONTROL REPORT (QCR) DAILY LOG OF CONSTRUCTION - MILITARY		REPORT NUMBER 246 Page 1 of 2																
PROJECT Facility Modernization of DeCA		DATE 08 Aug 2001 - Wednesday																
CONTRACTOR Sundt Corporation	WEATHER Weather Caused No Delay Temperature Min 94 °F, Max 116 °F; 1.5 Inches Precipitation; 45 MPH Wind	CONTRACT NUMBER DACA09-99-D-0020																
QC NARRATIVES																		
<p>Did anything develop that may lead to a Change Order/Claim? The Government Inspector insists that I not allow work to be in progress unless all of the applicable QC Staff are onsite. We have too many jobs in town and our QC Staff must cover all of them. This is causing us to send home crews and will delay the completion. I advised the Government Inspector that he should allow us to perform our QC duties every other day. That way we can do all the jobs.</p>																		
PREP/INITIAL DATES (Preparatory and initial dates held and advance notice) <p>A preparatory inspection was held today for the following feature: CERTILE</p> <p>An initial inspection was held today for the following feature: ADMIN</p>																		
ACTIVITY START/FINISH																		
<p>No activities were started today</p> <p>The following activity was finished today:</p> <table border="0"> <tr> <td>Activity No</td> <td>Description</td> </tr> <tr> <td>02310</td> <td>Submit for Earthwork</td> </tr> </table>			Activity No	Description	02310	Submit for Earthwork												
Activity No	Description																	
02310	Submit for Earthwork																	
QC REQUIREMENTS																		
<p>The following 3 QC requirements were completed today:</p> <table border="0"> <thead> <tr> <th>Requirement No</th> <th>Type</th> <th>Description</th> <th>Results</th> </tr> </thead> <tbody> <tr> <td>IP-00002</td> <td>Installed Property</td> <td>Light Housing, 3-lamp</td> <td>Passed</td> </tr> <tr> <td>TP-00001</td> <td>Transfer Property</td> <td>Spare ceramic tile pieces to be used in Resident Engineer's new house in Rocky Point, Mexico</td> <td>Passed</td> </tr> <tr> <td>US-00001</td> <td>User Schooling</td> <td>Provide training on Pump stuff</td> <td>Passed</td> </tr> </tbody> </table>			Requirement No	Type	Description	Results	IP-00002	Installed Property	Light Housing, 3-lamp	Passed	TP-00001	Transfer Property	Spare ceramic tile pieces to be used in Resident Engineer's new house in Rocky Point, Mexico	Passed	US-00001	User Schooling	Provide training on Pump stuff	Passed
Requirement No	Type	Description	Results															
IP-00002	Installed Property	Light Housing, 3-lamp	Passed															
TP-00001	Transfer Property	Spare ceramic tile pieces to be used in Resident Engineer's new house in Rocky Point, Mexico	Passed															
US-00001	User Schooling	Provide training on Pump stuff	Passed															
QA/QC PUNCH LIST (Describe QC Punch List items issued, report QC and QA Punch List items corrected)																		
<p>The following QC Punch List item was issued today:</p> <table border="0"> <thead> <tr> <th>Item No</th> <th>Location</th> <th>Description</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>QC-00001</td> <td>North Pad</td> <td>Must remove all fill and recompact. Subcontractor did not use water and it was too dry.</td> <td>Outstanding</td> </tr> </tbody> </table> <p>No QC or QA Punch List items were corrected today</p>			Item No	Location	Description	Status	QC-00001	North Pad	Must remove all fill and recompact. Subcontractor did not use water and it was too dry.	Outstanding								
Item No	Location	Description	Status															
QC-00001	North Pad	Must remove all fill and recompact. Subcontractor did not use water and it was too dry.	Outstanding															
CONTRACTORS ON SITE (Report contractors' first and/or last date on site)																		
<p>No contractors had their first or last day on site today</p>																		
LABOR HOURS																		
<p>No labor hours were reported today</p> <p>Total hours worked to date: 0.0</p>																		
EQUIPMENT HOURS																		
<p>The following equipment hours were reported today:</p> <table border="0"> <thead> <tr> <th>Equipment ID</th> <th>Description</th> <th>Standby Hours</th> <th>Operating Hours</th> </tr> </thead> <tbody> <tr> <td>00000001</td> <td>Front Loader</td> <td>2.0</td> <td>6.0</td> </tr> <tr> <td colspan="2">Total operating hours to date: 6.0</td> <td>Total</td> <td>2.0</td> </tr> </tbody> </table>			Equipment ID	Description	Standby Hours	Operating Hours	00000001	Front Loader	2.0	6.0	Total operating hours to date: 6.0		Total	2.0				
Equipment ID	Description	Standby Hours	Operating Hours															
00000001	Front Loader	2.0	6.0															
Total operating hours to date: 6.0		Total	2.0															

Chapter 4 – Submittals & Transmittals

What you will learn from this Chapter



- Overview of Submittals Requirements
- Reference Documents
- SpecsIntact Submittal Program
- Submittal Register (ENG Form 4288)
- Transmittal Log (ENG Form 4025)
- Transfer of Submittals

Contract Submittals

Overview



This chapter furnishes information on **Submittals** for our contracts and provides instructions for utilizing the associated **Submittal** related modules of the QCS program.

Reference Documents:

(These are hyperlinks and you will be taken directly to reference if you click on them and if you are connected to the Internet.)

1. [Engineer Regulation ER 415-1-10](#), Contractor Submittal Procedures
2. [Engineer Regulation ER 1180-1-6](#), Construction Quality Management
3. [Guide Specification UFGS-01330](#), Submittal Procedures

Submittals are a Contract Requirement

The Contractor is required to furnish a specified quality of construction, including materials and equipment to be incorporated in the work. Control of the quality of materials and equipment require timely review, testing, or other evaluation. All required submittals must be made in time to allow for evaluation, approval, procurement, and delivery prior to the preparatory control phase and before the item is needed in the construction process. The primary responsibility for the overall management and control of contractor submittals lies with the **Prime Contractor**. Monitoring of the Contractor's quality management control to assure that submittals are timely, appropriately certified, and in compliance with the contract is the responsibility of the **Government**.

While the submittal process can be time consuming for both Contractor and Government technical and administrative personnel and can significantly affect the construction schedule, procurement, placement, testing, and transfer procedures, it is critical to the success of both the quality control and quality assurance processes. As such, its scope must be carefully thought out during the design process and submittal requirements tailored to trim-fit the specific job. Because submittal approval must be timely to allow procurement and delivery of materials or equipment prior to the preparatory inspection (P/I) phase of the 3-step inspection process, the number and type of submittals required by the contract should be kept to the minimum amount sufficient to assure the specified construction quality is achieved.



From a contractual standpoint, all required submittals are “important”. However, some are more critical to quality management than others, particularly extensions of design, deviations, and those involving critical materials or equipment, which must be compatible with an entire system. By regulation and policy, these critical submittals require Government approval. Review for Government approval can involve construction field and District Office, District engineering division, and design Architect-Engineer personnel. Submittals of a less critical nature are usually approved by the contractor and submitted to the Government “**For Information Only**” (FIO). As a quality assurance measure, regulations require Government review of a percentage (10%) of all Contractor approved FIO submittals.

Submittals that require Government Approval

Submittals that should always require Government Approval are: (Examples provided are not all inclusive and are used only for illustration purposes.)

Extensions of Design

Examples:

1. Fire Alarm Systems
2. Fire Sprinkler Systems
3. Prefabricated Buildings
4. Structural Steel Drawings
5. Standing Seam Metal Roof Drawings
6. Coordination Studies such as short circuit analysis

Critical Materials

These are materials that must meet specific quality performance standards.

Examples:

1. Coatings for Cathodic protection of storage tanks
2. High-pressure piping and controls
3. Acid and Hazardous Waste Systems
4. Architectural Finishes for Customer Approval

Deviations.

This includes any submittal by the construction Contractor that varies from the construction contract specifications or drawings.

O&M Manuals

These include those involving equipment that must be checked for compatibility with the entire system.

Examples:

1. Sewage Treatment Systems

2. Water Purification Plants
3. Energy Management Control Systems
4. Intrusion Detection Systems
5. Power Generation and Distribution Systems

A Mechanical Engineer assigned as a District support staff provided the following scenario about the difference between an **FIO** and a **GA** submittal. It seems to hit the head on the nail, and is worth sharing:

I found myself in the middle of a heated discussion concerning a For Information Only (FIO) submittal.

The contractor felt the government reviewer had imposed additional and unreasonable requirements on an FIO submittal, after all, it was for information only. *Why was the reviewer requesting more information? Why was the submittal rejected as incomplete and returned?*

A great question! What is the difference between an FIO submittal and a Government Approved, GA, submittal?

The only difference that I could think of was payment. The GA submittal requires an approved action code by the government before we will accept an invoice for payment. After an FIO submittal receives an approved action code from the Contractor Quality Control staff and it is submitted to the government, the contractor can invoice the government in the next pay request without waiting for any further action by the government.

Reviewing section 01330, Submittals, paragraph 3.1, the information required in the submittal does not vary from a GA to an FIO submittal. The information requirements are not dependent upon who is doing the review and approval. The FIO and GA designation refers to only the approval sequence of the submittal.

In the above event, the government reviewer was correct in requiring the Contractor to provide additional information per the appropriate SD and rejecting the submittal as incomplete.

During our review of FIO submittals, 10% of all FIO submitted for a project, we should not expect to see a lesser-detailed submittal nor should we accept a lesser-detailed submittal.

Emmanuel J. Molina, CESPL-CO-CS
213-452-3384
emolina@spl.usace.army.mil

SpecsIntact

(Specifications-Kept-Intact) Specification Production System

The National Aeronautics and Space Administration (NASA) developed this program over a period of years; by the Construction Criteria Base (CCB) system, which was developed by the National Institute of Building Sciences (NIBS); by the cooperative efforts of the military services; and by the Internet.

The use of SpecsIntact in both Military and Civil construction contracts is mandatory, as established within Engineering Regulation **ER 1110-2-1201** and CEMP-EA (1110) Memorandum of 14 April 1997, for all FY00 and future projects. This policy has been incorporated into **ER 1110-345-700**, “**Drawings, Design Analysis, and Specifications**”.

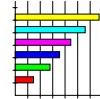
For those that may need assistance with SpecsIntact, the **Kennedy Space Center** (KSC) maintains a web site at URL <http://si.ksc.nasa.gov/specsintact/> to accept user feedback and to provide access to the latest software releases, the on-line User Guide, and other current news. Additionally, CECW-EP has arranged for on-site SpecsIntact training if requested, and the Prospect Course 185, **Specification Writing for Construction Contracts**, includes four hours of SpecsIntact job processing and editor instruction.

The Corps of Engineers uses a section numbering system based on the CSI MasterFormat; and uses a uniform section format based on the CSI Manual of Practice and the SpecsIntact system. The Corps of Engineers Guide Specifications is designed to be used with SpecsIntact. It is a personal computer-based system for the production of project specifications. SpecsIntact is designed to assemble project specifications from one or more guide specification databases (Masters), from other projects, or from sections written specifically for the project. When our contract specifications are generated in SpecsIntact they can be directly imported into RMS in the format of the ENG Form 4288, **Submittal Register**, and then exported into the QCS program. A future enhancement will afford the ability to import from SpecsIntact directly into QCS. This will be especially important for Design-Build contracts.

Government Responsibilities (ER 415-1-10)

The designer will prepare a list of submittals required for each contract. This list must be very specific to allow the construction Contractor to know exactly what is required to be submitted. This list will be prepared electronically on ENG Form 4288-R (**Submittal Register**) and will be limited to columns “d” thru “o”. This list will be provided in hard copy and on computer diskette, which is compatible with the QCS and RMS software. Prior to advertisement, construction and engineering elements jointly determine what submittals require Government Approval (GA) and what submittals are designated For Information Only (FIO). This is noted in columns “p” and “q” on the ENG Form 4288-R. Column “r” is used to designate the reviewer. The information on ENG Form 4288-R is usually incorporated into the specifications prior to advertisement. However, for Design-Build contracts, the Contractor is required to produce this document.

1. The Government COR (Contracting Officer Representative) will review the Contractor's submittal control document for compliance to the contract, and to assure that all required submittal schedules, review time, and procurement lead times are reasonable. In addition, the document shall be checked against the **Network Analysis System** or other approved construction schedule.



Good News Scenario: Contractor reflects that he is 30-days AHEAD OF SCHEDULE.

Bad News Scenario: The Contract Submittals may very well be BEHIND SCHEDULE by the same time.

Solution: If work or progress is being accelerated for any reason, including Contractor efficiency, the submittal process must also be accelerated.

2. The master copy of the control document is usually maintained in the Area/Resident Office. Control at this level is necessary to ensure effective management of the Contractor and timely response by the Government. It is essential that a complete record of all action dates be maintained and that the document reflect current information for each contract. It is important that certifications required after completion of construction, like roofing systems and underground heat distribution systems, be monitored and obtained at the appropriate times. The Area/Resident Engineer should monitor progress at all times and take appropriate action for any delay. Examples of appropriate actions for Contractor caused delays include letters advising of delinquency, retainage for unsatisfactory progress, and nonpayment for unapproved materials.

Submittal Processes

Now that we understand way more than we will probably need to know, let's look at how to use QCS for control of Submittals.

Contract Setup

During the setup of a contract, the Government will typically load the ENG Form 4288, Submittal Register, into RMS and it would be exported to the QCS program upon award of the contract. The register is best imported directly from SpecsIntact, as explained earlier. In the case of a Design-Build contract, the Contractor will eventually be able to import the register directly from SpecsIntact. At this time, it can be loaded manually into QCS. A contract may have an unlimited number of submittal registers, and this is determined by the contract itself. The setup

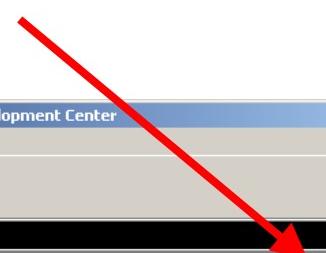
Quality Control System

for determining the number of registers is part of the RMS program and would be exported to the QCS program.

This screen reflects a listing of submittal items from the QCS program. It is accessed from the **CONTRACT MENU /ADMINISTRATION / SUBMITTAL REGISTER**, as shown below.

This listing can be filtered by one of the following choices:

- a. *All Submittals*
- b. *Completed Submittals*
- c. *Outstanding Submittals*
- d. *Submittals in Review*



Contract Menu - [L1000107] DACA05-01-C-0021 NA Child Development Center

Administration - Submittal Register [01 Main Register]							
<u>Contract Description</u>		Add	Edit	Delete	Find	All Submittals	
Action Items	Section	Item No.	Description		SD No.	Received by Government	QA Code
<u>Prime Contractor</u>	010000	1	GEOTECHNICAL REPORTS		06	03/13/2002	A
<u>Subcontractors</u>	010000	2	PRODUCT DATA		03		
<u>Contractor Insurance</u>	010000	3	PRODUCT DATA		03		
<u>Contractor Payrolls</u>	010000	4	SHOP DRAWINGS		02		
	010000	5	SETTING DRAWINGS		02		
	010000	6	SAMPLES FOR VERIFICATION		04		
	010000	7	PRODUCT DATA		03		
	010000	8	QUALIFICATION DATA		38		
<u>Pay Activities</u>	01320	1	PROJECT SCHEDULE		18	09/17/2002	A
<u>Progress Payments</u>	01330	2	MECHANICAL ROOM LAYOUT DF		15	10/04/2002	A
	01330	3	AS-BUILT DRAWINGS		15		B
<u>Specification Sections</u>	Transmittal History						
<u>Submittal Register</u>	Edit		Transmittal Number	Variation	Received by Government	QC Code	Sent to Contractor
<u>Transmittal Log</u>			010000-1		03/13/2002	A	04/09/2002

Record 1 of 478

Only after our Submittal register(s) is setup, will we be able to begin tracking the actual *Submittals* and *Transmittals* for our contract.



Submittal Requirements

If the Government, via the RMS program, has the SpecsIntact import, you are finished with the setup and the register may be viewed immediately. However, you still may want to make manual entries, or even the complete register entry, so we will explore that process next.

SUBMITTAL REGISTER (ER 415-1-10)				TITLE AND LOCATION		Landfill Expansion, Ft. Irwin, CA		DATE		04 Jul 2000				
ACTIVITY NUMBER	TRANS-MITTAL NUMBER	ITEM NUMBER	SPECIFICATION PARAGRAPH NUMBER	DESCRIPTION OF SUBMITTAL	TYPE OF SUBMITTAL	CLASSIFICATION		REVIEWER	CONTRACTOR SCHEDULED DATES		CONTRACTOR ACTION		GOVERNMENT ACTION	
						INFO ONLY	GOMT APPR		SUBMIT NEEDED BY	APPROVAL NEEDED BY	MATERIAL NEEDED BY	SUBMIT CODE TO CORPS	CODE	DATE
SECTION - 00200 Bid/Proposal Form														
3	1	00200				X		Eric G Holland						29 Jul 98
SECTION - 00300 Subcontractor List														
		1	00300			X								
SECTION - 16721 Fire Detection and Alarm System														
P570	1	16721 3.6	Fire Alarm Control Panel		Data	X		Fred Freeman						

Example Register – ENG Form 4288

Manually Adding Submittal Items to the Register

We begin the process by selecting **ADMINISTRATION** and highlighting the **Submittal Register** and pushing the **ADD** button, as shown below.

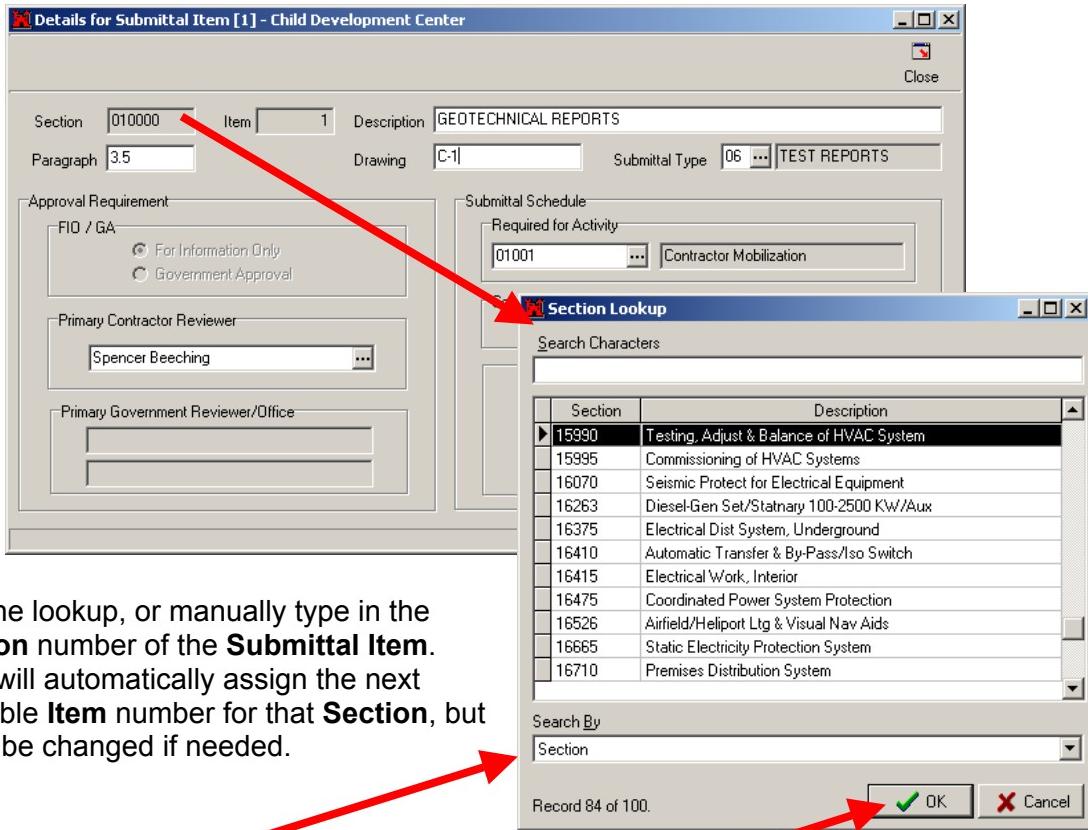


The screenshot shows the RMS software interface with the following details:

- Contract Menu - [L1000107] DACA05-01-C-0021 NA Child Development Center**
- Administration - Submittal Register [C: Main Register]**
- Toolbar Buttons:** Home, Administration, Quality Control, Import/Export, Overview, Reports.
- Submittal Register Grid:**

Section	Item No.	Description	SD No.	Received by Government	QA Code	Sent to Contractor	QA Code
010000	1	GEOTECHNICAL REPORTS	06	03/13/2002	A	04/09/2002	F
010000	2	PRODUCT DATA	03				
010000	3	PRODUCT DATA	03				
010000	4	SHOP DRAWINGS	02				
010000	5	SETTING DRAWINGS	02				
010000	6	SAMPLES FOR VERIFICATION	04				
010000	7	PRODUCT DATA	03				
010000	8	QUALIFICATION DATA	38				
01320	1	PROJECT SCHEDULE	18	09/17/2002	A	10/17/2002	C
01330	2	MECHANICAL ROOM LAYOUT DF 15		10/04/2002	A	10/15/2002	B
01330	3	AS-BUILT DRAWINGS	15				
- Transmittal History Grid:**

Transmittal Number	Variation	Received by Government	QC Code	Sent to Contractor	QA Code
010000-1		03/13/2002	A	04/09/2002	F
- Left Sidebar:** Contract Description, Action Items, Prime Contractor, Subcontractors, Contractor Insurance, Contractor Payrolls, Pay Activities, Progress Payments, Specification Sections, Submittal Register (highlighted in red), Transmittal Log.
- Status:** Record 1 of 478

Submittal Item Screen

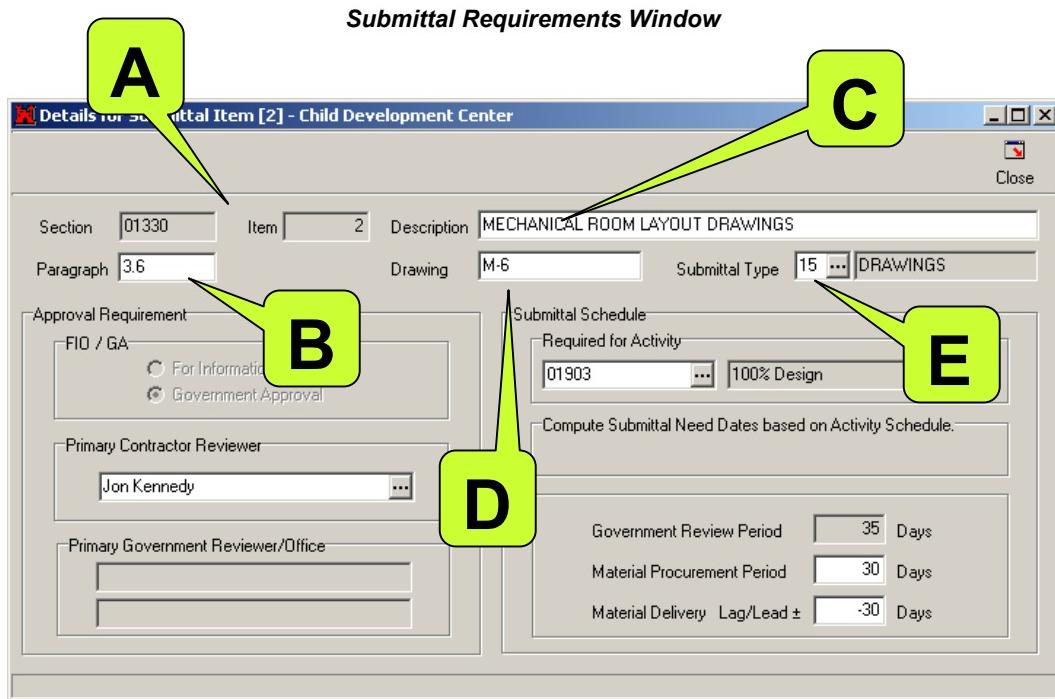
Use the lookup, or manually type in the **Section** number of the **Submittal Item**. QCS will automatically assign the next available **Item** number for that **Section**, but it can be changed if needed.

You can "search" by **Section** or **Description**.

Push the **OK** button when completed.

You are now ready to begin entering the specific details and requirements of the submittal item.

Submittal Details and Requirements



A After the **Section** and **Item** numbers are inserted, and you leave this first screen, they cannot be changed. (If it is incorrect, you will need to delete it and re-enter before proceeding further.)

B The **Paragraph** number is entered from the *Specification Section* paragraph that references the details of this particular submittal item.



It is highly recommended that the paragraph number be taken from within the body of the specification section that gives the *detailed requirements* of the item. The paragraph number from the front of the section that simply requires the item to be submitted is actually of little use for our purposes of administering the contract.

C The **Description** of the item should clearly convey what it is that is being submitted. It is best not to abbreviate unless it just makes sense to do so. The **Description** will appear on many of the Forms and Reports throughout the QCS and RMS programs.

D

The **Drawing** number is the sheet number from the *Contract Drawings* where the item being submitted may be located or referenced (e.g., Sheet C-3A).

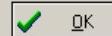
E

The **Submittal Type** conveys the nineteen *Submittal Descriptions* (SD) that are part of the SpecsIntact program. There are eleven submittal descriptions used on Corps of Engineers', Department of the Air Force, and the Department of the Navy contracts.

Submittal Type Lookup Table



Lookup		
Search Characters		
SD NO.	Submittal Type	Description
15	DRAWINGS	DRAWINGS
16	SURVEY DATA	SURVEY DATA
17	INSTRUCTIONS	INSTRUCTIONS
18	SCHEDULES	SCHEDULES
19	STATEMENTS	STATEMENTS
20	REPORTS	REPORTS
21	CALCULATIONS	DESIGN ANALYSIS/CALCULATIONS
22	MIX DESIGN	MIX DESIGNS
23	SYSTEM ANALYSIS	SYSTEM ANALYSIS
24	EQUIP PERF DATA	EQUIPMENT PERFORMANCE DATA
25	EQUIP FOUNDATN	EQUIPMENT FOUNDATION DATA



Submittal Descriptions:

SD-01 = Preconstruction Submittals - Submittals which provide Certificates of Insurance, Surety Bonds, List of proposed subcontractors, List of proposed products, Construction Progress Schedule, Submittal Register, Schedule of values, Health and Safety Plan, Work Plan, Quality Control Plan and Environmental Protection Plan.

SD-02 = Shop Drawings – Drawings, schedules, diagrams, and other data prepared specifically for this contract, by contractor or through contractor by way of subcontractor, manufacturer, supplier, distributor, or other lower tier contractor, to illustrate portion of work.

SD-03 = Product data – Preprinted material such as illustrations, standard schedules performance charts, instructions, brochures, diagrams, manufacturer's descriptive literature, catalog data, and other data to illustrate portion of work, but not prepared exclusively for this contract. And, samples of warranty language when the contract requires extended product warranties.



SD-04 = Samples – Physical examples of products, materials, equipment, assemblies, or workmanship that are physically identical to portion of work, illustrating portion of work or establishing standards for evaluating appearance of finished work or both. This includes color samples, field samples and mock-ups constructed on the project site.

SD-05 = Design Data – Calculations, mix designs, analyses or other data pertaining to a part of work.

SD-06 = Test Reports – Report signed by authorized official of testing laboratory that a material, product or system identical to the material, product or system to be provided has been tested in accord with specified requirements. (Testing must have been within three years of date of contract award for the project.) Report which includes findings of a test required to be performed by the Contractor on an actual portion of the work or prototype prepared for the project before shipment to job site. Report which includes finding of a test made at the job site or on sample taken from the job site, on portion of work during or after installation. Investigation reports. Daily checklists. Final acceptance test and operational test procedure.

SD-07 = Certificates – Statements signed by responsible officials of manufacturer of product, system or material attesting that product, system or material meets specification requirements. Must be dated after award of project contract and clearly name the project. Document required of Contractor, or of a supplier, installer or subcontractor through Contractor, the purpose of which is to further quality of orderly progression of a portion of the work by documenting procedures, acceptability of methods or personnel qualifications. Confined space entry permits.

SD-08 = Manufacturer's Instructions – Preprinted material describing installation of a product, system or material, including special notices and Material Safety Data Sheets concerning impedances, hazards and safety precautions.

SD-09 = Manufacturer's Field Reports – Documentation of the testing and verification actions taken by manufacturer's representative to confirm compliance with manufacturer's standards or instructions. Factory test reports.

SD-10 = Operation and Maintenance Data – Data that is furnished by the manufacturer, or the system provider, to the equipment operating and maintenance personnel. This data is needed by operating and maintenance personnel for the safe and efficient operation, maintenance and repair of the item.

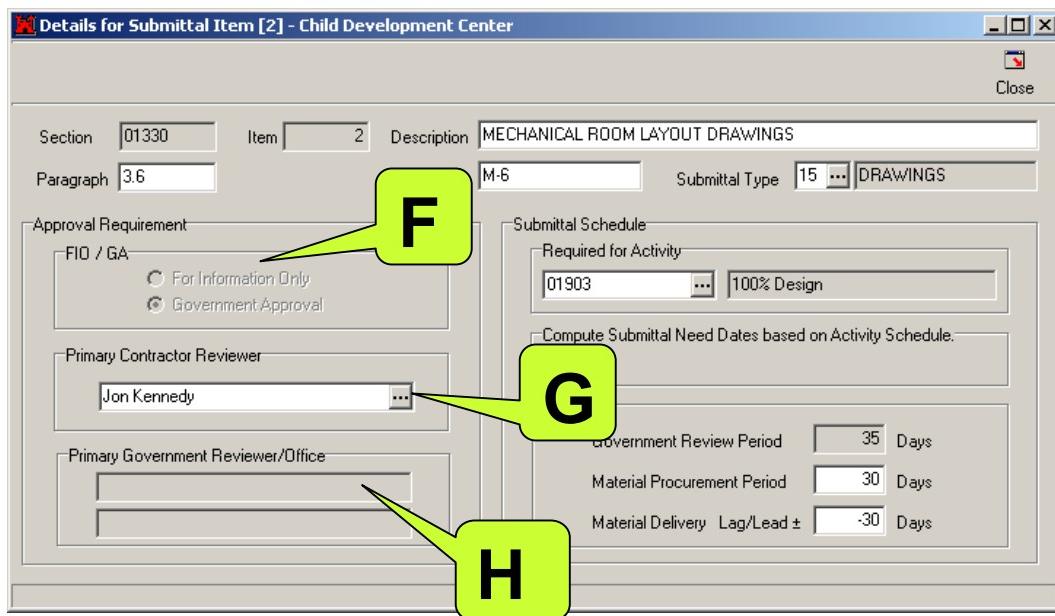
SD-11 = Closeout Submittals – Documentation to record compliance with technical or administrative requirements or to establish an administrative mechanism.



The **SpecsIntact Configuration, Control and Coordinating Board** have assigned the SD numbers and names, and they correspond to the terminology used in the technical sections. These numbers and names should remain consistent. An individual Corps of Engineers District Office can add additional SD numbers and names within the Government RMS program.

Approval Requirements

Submittal Requirements Window



F Indicate whether this submittal item will be approved by the Contractor (**For Information Only**) or will require **Government Approval**. The submittal register (*ENG Form 4288-R*) will use the abbreviation of **FIO** for Information Only submittals and **GA** for Government Approval.

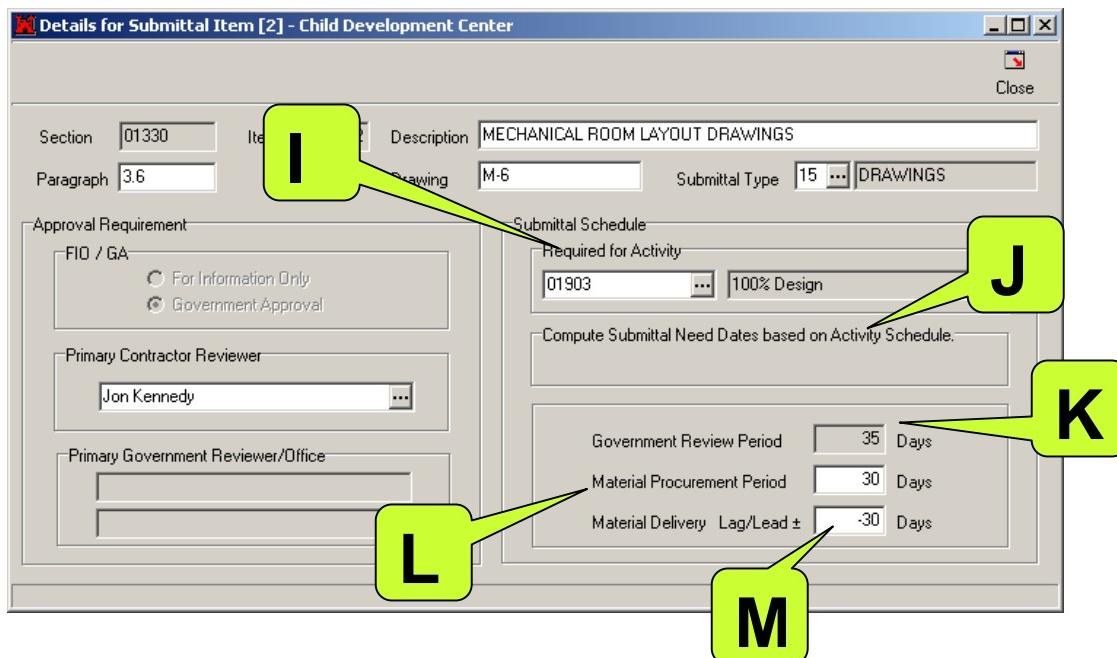
G The **Primary Contractor Reviewer** should be selected from the Lookup table. This is typically the individual with overall responsibility for submittal control for the QC process. This individual would coordinate all comments for secondary reviewers, subcontractors, and so forth, prior to submitting the final comments back to the Government with the Transmittal form (*ENG Form 4025*).

H The **Primary Government Reviewer/Office** blocks are primarily controlled by the Government. The lookup can initially be used to indicate that it is expected to be reviewed at the Corps of Engineers District Office (DO), Area Office (AO), Resident Office (RO), Project Office (PO), or by the Architect-Engineer (AE). It may be changed by the Government via a future Export / Import. This is typically the individual with overall responsibility for submittal control for the QA process. This individual would coordinate all comments for secondary reviewers prior to submitting the final comments back to the Contractor with the Transmittal form (*ENG Form 4025*).

Submittal Schedule

In order verify that submittals are or will be timely, they must be coordinated with the Contractor's *scheduling system* (i.e., NAS). QCS, RMS and *ENG Form 4288-R* **REQUIRE** that every submittal item be attached to an individual **Activity** from the Contractor's schedule.

Submittal Requirements Window



I Use the lookup provided for **Required for Activity** and attach the associated Activity for the item being entered on this screen. The idea is to be able to verify that an item is submitted prior to submitting payment for an associated Activity. Therefore, **IT MUST BE ATTACHED to the VERY FIRST activity that has money (funds) attached to it.** The submittal must be approved, etc., prior to the first occurrence of the product being used or installed.

This is important for many obvious reasons, but one specifically comes to mind that we need to understand:

The Activity **start date**, along with **material procurement and lag/lead times**, and the **Approval period** is what determines the dates printed out on the *ENG Form 4288-R* and provides the data for the various sorts within our Submittal Reports.

J In this example, QCS and RMS will *compute* the Submittal need date on the **Early Start Date** for the Activity, based on the NAS being used. Alternatively, a **Manually Entered Work Start Date** could be entered here. If the Manual method is selected, a popup calendar will appear and you must enter, and keep updating, the expected start date for the activity.

K

The **Government Review Period** is typically 35 calendar days, exclusive of mail time. However, there may be specific submittals or technical sections that have different review periods. For example, it is not uncommon for a contract to specify 90-calendar days for approval of structural steel drawings or prefabricated metal buildings, and so forth. There may also be shorter review periods in some of the front-end specification sections. In any case, enter the review period for this item as required. It will be a time specified in the contract, or a time as mutually agreed after award of the contract.



In the case of a Design-Build Contract, the Contractor must also account for any review period by his Design forces. This may result in a very lopsided requirement time for the submittal to be provided.

L

You, as the Contractor, are the only one that can complete the **Material Procurement Period** (unless, perhaps, that Government Furnished Property is being entered). The Prime Contractor must coordinate this period with the responsible Subcontractor during the completion of the register.

Common materials, like cement or gravel may be considered “off-the-shelf items” and the procurement period may be entered as zero. However, there are many pieces of electrical and mechanical equipment that takes weeks, and even months, to receive on the jobsite, following submittal approval. This is an area often ignored, but should be consistently recorded.

M

The item represented by this submittal should always be linked to a pay activity. Consequently, the item is either needed on site before the activity starts, when it starts, or after it starts. QCS and RMS use the terms *Lag/Lead* for tracking this information.

Lead Time: minus (-) so many days prior to start of activity

Example: The Activity may be “Drywall”. The submittal item may be the *sheetrock* needed for the Activity. The *sheetrock* may be needed on site 3 days prior to start of the “Drywall” to allow stocking, verification, etc.

Zero: start of activity

Example: The Activity may be “Concrete”. The submittal item may be “Curing Compound” (an off-the-shelf item). The curing compound is needed when the activity “Concrete” begins.

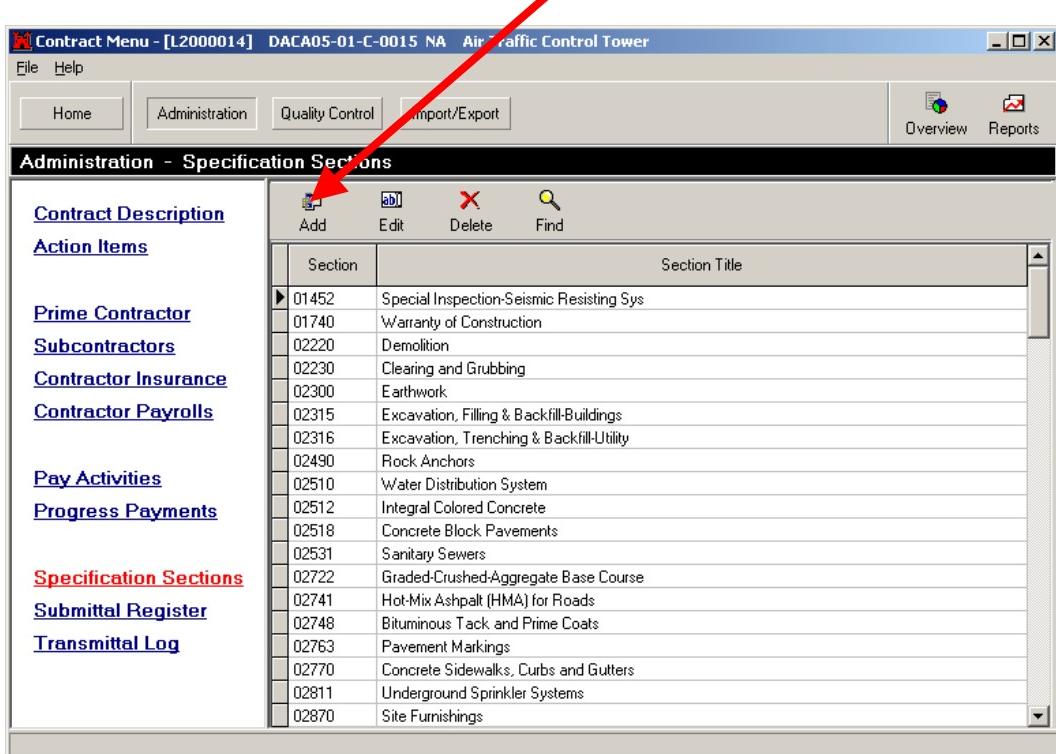
Lag Time: plus (+) so many days after start of activity

Example: The Activity may be “Erect Metal Building”. The submittal item may be “*Metal Siding*”. The “Metal Building” would be started with erection of the structural steel members and after that was completed, the “*Metal Siding*” would be applied. This lag time may be several days or even weeks.

Specification Sections

They may be occasion where the Contractor needs to add a Specification Section that is not in the existing submittal register. For example, a Modification has added a specification section, or the contract is a Design-Build contract. You now have two choices when adding a **Specification Section** within QCS. You may select the **Add** button and view the drop-down menu:

- Manually Add New Section
- Select Sections From Library

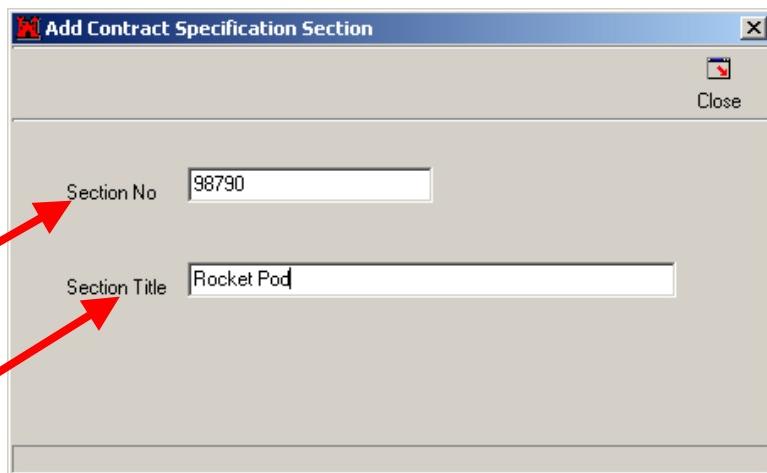


Manually Add New Section

You may add a section using any number or title you wish.

The section number can be up to six (6) characters long (alpha or numeric).

The section title may be up to 45 characters in length.



Select Sections from Library

You view a lookup that originates in the **Government Library** from the **Home** menu. You can either **Check All Sections** (*I can't imagine you REALLY needing this, but.....*) or check the individual sections you need.

Once you choose **Check All Sections**, the title will change to **Remove All Checks From Sections**. (*That is a GOOD thing, just in case you REALLY used Check All Sections!*)

Specification Sections Library Lookup	
<input type="checkbox"/> Check All Sections.	
Section	Title
<input type="checkbox"/>	16264 Diesel-Generator Set, 15-300 KW, Standby
<input type="checkbox"/>	16265 Uninterruptible Power Supply Sys >15kVA
<input type="checkbox"/>	16311 Main Electric Supply Station/Substation
<input type="checkbox"/>	16370 Electrical Distribution System, Aerial
<input type="checkbox"/>	16403 Motor Control Centers, Swbds & Prlbds
<input checked="" type="checkbox"/>	16475 Coordinated Power System Protection
<input type="checkbox"/>	16525 Helipad Lighting/Visual Navigation Aids
<input type="checkbox"/>	16528 Ext Ltg, Inc. Security & CCTV Applicatns
<input type="checkbox"/>	16650 Electromagnetic (EM) Shielding
<input type="checkbox"/>	16721 Intercommunication System
<input type="checkbox"/>	16750 Nurse Call System
<input type="checkbox"/>	16751 Closed Circuit Television Systems
<input checked="" type="checkbox"/>	16755 Radio Paging System
<input type="checkbox"/>	16770 Radio and Public Address Systems
<input type="checkbox"/>	16781 Master Antenna Television System
<input type="checkbox"/>	16790 Stand-Alone One-Way Radio Control System
<input checked="" type="checkbox"/>	16792 Wire Line Data Transmission System
<input type="checkbox"/>	16794 Coaxial Cable Data Transmission Media
<input type="checkbox"/>	16797 1-Way FM Radio Cntr/Util Mon/Cntr (UMCS)
<input type="checkbox"/>	16798 Two-Way Radio Data Transmission System
<input type="checkbox"/>	16905 Electrical Equipment for Gate Hoist

Quality Control System

This completes the preparation of the submittal register. These screens are completed for 100% of the items requiring submission. The *ENG Form 4288-R* can be generated and is officially known as the "Submittal Register". The next thing that occurs would be that of selecting one or more of these submittal items and sending them to the Government for approval or record purposes. The transmittal form that will be used is the *ENG Form 4025*.

Sample Submittal Register – ENG Form 4288

SUBMITTAL REGISTER (ER 415-1-10)				TITLE AND LOCATION Design/Constr Family Housing, Area 4, Redstone Arsenal, AL				DATE 05 Sep 2001									
ACTIVITY NUMBER	TRANS- MITTAL NUMBER	ITEM NUMBER	SPECIFICATION PARAGRAPH NUMBER	DESCRIPTION OF SUBMITTAL	TYPE OF SUBMITTAL	CLASSIFICATION	REVIEWER	CONTRACTOR SCHEDULED DATES			CONTRACTOR ACTION		GOVERNMENT ACTION				
								INFO ONLY	GOVT APPR	SUBMIT NEEDED BY	APPROVAL NEEDED BY	MATERIAL NEEDED BY	CODE	SUBMIT TO CORPS	CODE	DATE	
	2	01451 1.1.5	Construction Office Trailer & Compound	SHOP DRAWINGS	X									13 Sep 99	B	16 Sep 99	
	5	01451 3.2.2	CQC Plan	DATA	X									07 Feb 00	A	18 Feb 00	
	7	01451 3.4.3	CQC System Manager	DATA	X									A	15 Oct 99	B	10 Nov 99
	8	01451 3.4.3	CQC System Manager(Alternate)	DATA	X									A	15 Oct 99	B	10 Nov 99
SECTION - 02050				9	02050	Demolition Plan	DATA	X						21 Oct 99	A	29 Oct 99	
SECTION - 02085				1	02085	Test Reports	REPORTS	X									
	2	02085	Certification			CERTIFICATES	X										
SECTION - 02090				1	02090	Lead-Based Paint Abatement and Disposal	CERTIFICATES	X									
SECTION - 02200				1	02200	Test Reports	REPORTS	X							04 Feb 00	F	18 Feb 00
	2	02200	Earthwork Certificates			CERTIFICATES	X										
	3	02200 20.1	Moisture Density - Lookout Pit			RPTSTESTS	X								17 Feb 00	F	18 Feb 00
	4	02200 2.01A	Moisture-Density Relationship Test			RPTSTESTS	X								01 Mar 00	F	16 Mar 00
	5	02200 2.01	Moisture-Density Relationship Test Wesso			RPTSTESTS	X								13 Apr 00		
	6	02200 2.01	Moisture-Density Test Dyer Circle Util			RPTSTESTS	X								13 Apr 00		
SECTION - 02400				1	02400 2.01	Storm Drainage	DATA	X							22 Feb 00	F	16 Mar 00
SECTION - 02713 Bituminous Base Course				1	02713 2.01	Water Distribution Systems	DATA	X							18 Apr 00	A	19 Apr 00
SECTION - 02722 Graded-Crushed-Aggregate Base Course				1	02722 2.01	Sanitary Sewers	DATA	X							16 May 00	F	16 May 00
SECTION - 03300 Cast-In-Place Structural Concrete				1	03300 1.02	Materials and Mix Designs	PRODUCT DATA	X							14 Mar 00	A	22 Mar 00
	2	03300 1.02	Reinforcement Shop Drawings			SHOP DRAWINGS	X								14 Mar 00	A	22 Mar 00
	3	03300 1.02	Test Reports			RPTSTESTS	X										
	4	03300 1.02	Vapor Barrier			TECH DATA	X								14 Mar 00	A	22 Mar 00
	5	03300	Curing Compound			DATA	X								14 Mar 00	A	22 Mar 00
SECTION - 06100 Rough Carpentry				1	06100 1.02	Treatment Certification	CERTIFICATES	X							A		
	2	06100 1.03	Product Data			DATA	X										
005	1	06100 3	Striping Template			DATA	X		Henry						G		
SECTION - 06192				RANGE: ALL										SORT : SECTION & ITEM			

Transmittal Processes

Preparing the Transmittal Log (ENG Form 4025)

The form provided by QCS to track submittal items is the *Transmittal Log*. This log will include one or more submittal items for one (and only one) technical specification section. QCS will print this form as part of the Submittal Control process.

If your contract includes more than a single register, you will need to choose which one you want to work with. Select the appropriate register and push the **OK** button.



The Transmittal Log screen separates the transmittals into four different periods. The periods are reflected by the label on the four tabs and are primarily for tracking and reporting purposes:

Prepare Transmittals - Definition

- These are transmittals that have been prepared or are being prepared but, for one reason or another, have not been sent to the Government.

Sent to Government - Definition

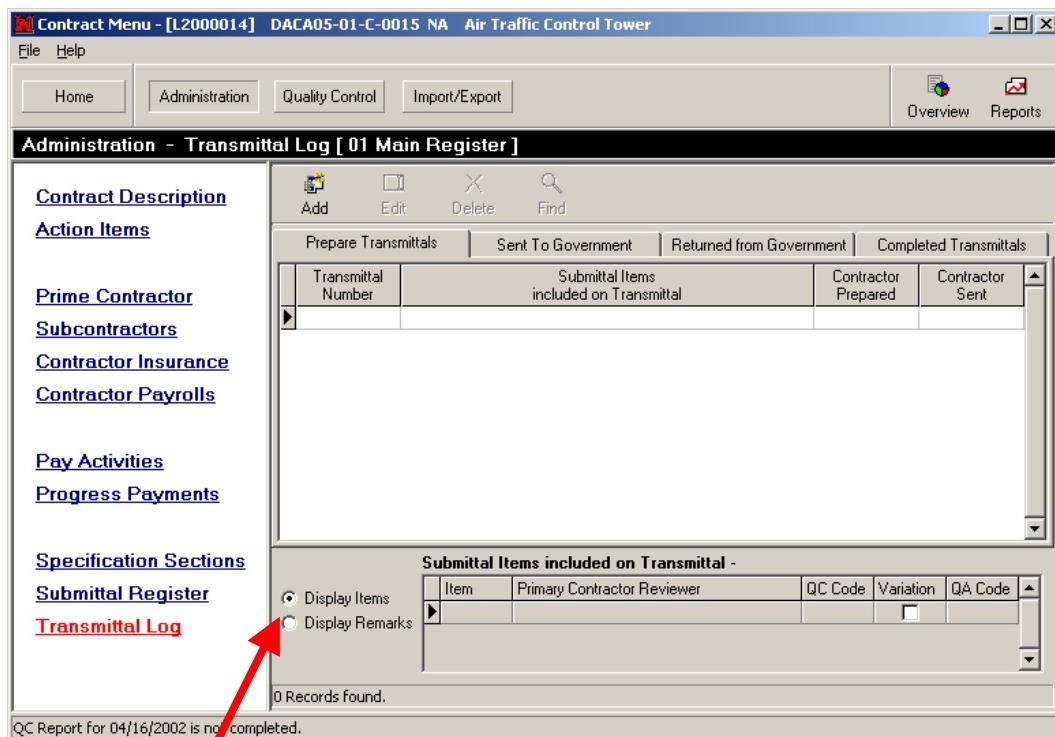
- These are *Prepared Transmittals* that have been completed by the Contractor and sent to the Government for review and/or information.

Returned from Government - Definition

- These are *Prepared Transmittals* that have been Sent to the Government and the Government has taken approval/disapproval/acknowledgement action on it and returned it to the Contractor.

Completed Transmittals - Definition

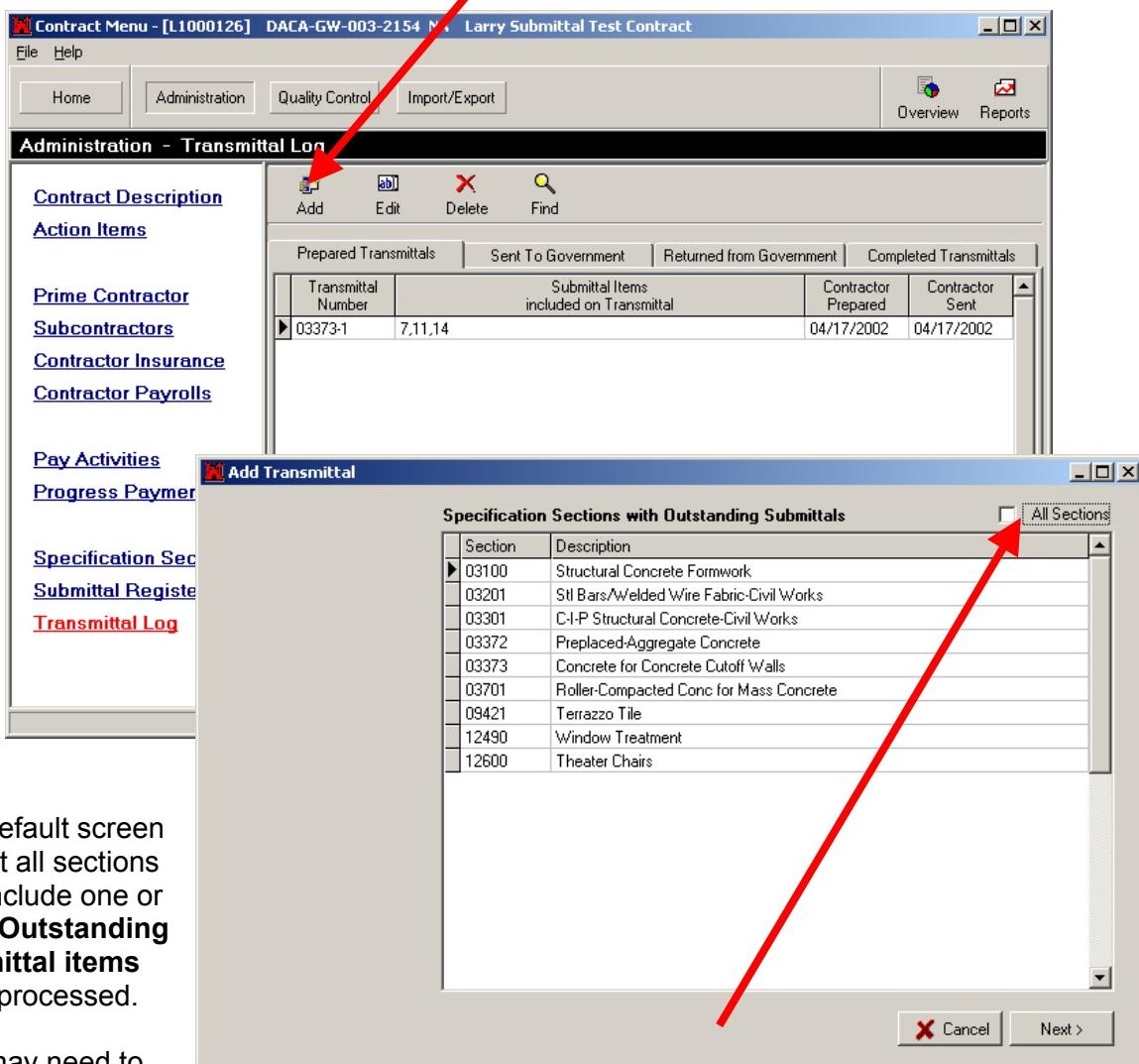
- These are transmittals that have been returned by the Government and acknowledged as received by the Contractor.



At the bottom of each screen you have the option of displaying the Item Numbers on the Transmittal, or the Remarks associated with the Transmittal.

Prepare Transmittals

The **Transmittal Log** is accessed from the main **CONTRACT MENU / ADMINISTRATION / Transmittal Log**, as shown on the following screen. You can **EDIT** an existing *Transmittal* or **ADD** a new one. For our purposes, push the **ADD** button.



The default screen will list all sections that include one or more **Outstanding Submittal items** to be processed.

You may need to provide a transmittal for an item already submitted and approved, in which case you may select the **All Sections** box at the top right of the screen. In that case, ALL sections will be shown on the list, including completed submittal items.

Choose the desired item from the listing and push the **Next** button on the lower right of the window.

The Next window shows all **Outstanding Submittals** from which to choose. You also have the option to show ALL submittal items if desired. You simply check one or more items that you want to include on the transmittal form. RMS will determine if the item is being submitted for the first time, or if it is a re-submittal of a previous item, and provide the numbering required to be used by the program.

Section 16050

Outstanding Submittals - Select Items to be Submitted							
	Item No.	Description	SD No.	Office	Classification	Last Transmittal	QA Code
<input type="checkbox"/>	1	Electrical Dwg - Inst & Pwr Panel	02	CENWW	GA		
<input type="checkbox"/>	26	Ethernet cable	03	CENWW	FIO		
<input type="checkbox"/>	50	Indicating Lights	03	CENWW	FIO		
<input type="checkbox"/>	58	Tests, Fiber Optic	06	CENWW	GA		
<input type="checkbox"/>	61	Tests, Motor	06	CENWW	GA		
<input type="checkbox"/>	65	Test Forms, Motor	06	CENWW	GA		
<input type="checkbox"/>	66	Field Test Reports	06	CENWW	GA		
<input type="checkbox"/>	68	O & M MANUAL - Vols 1,2,& 3	12	CENWW	GA	16050-11	E

All Submittal Items

Add Submittal Item Cancel OK

If the first item selected is a NEW submittal, this screen will appear.

This is a new Transmittal

Transmittal Number 03301 - 2

OK Cancel

This is a Resubmittal of Transmittal No 03100-1.5

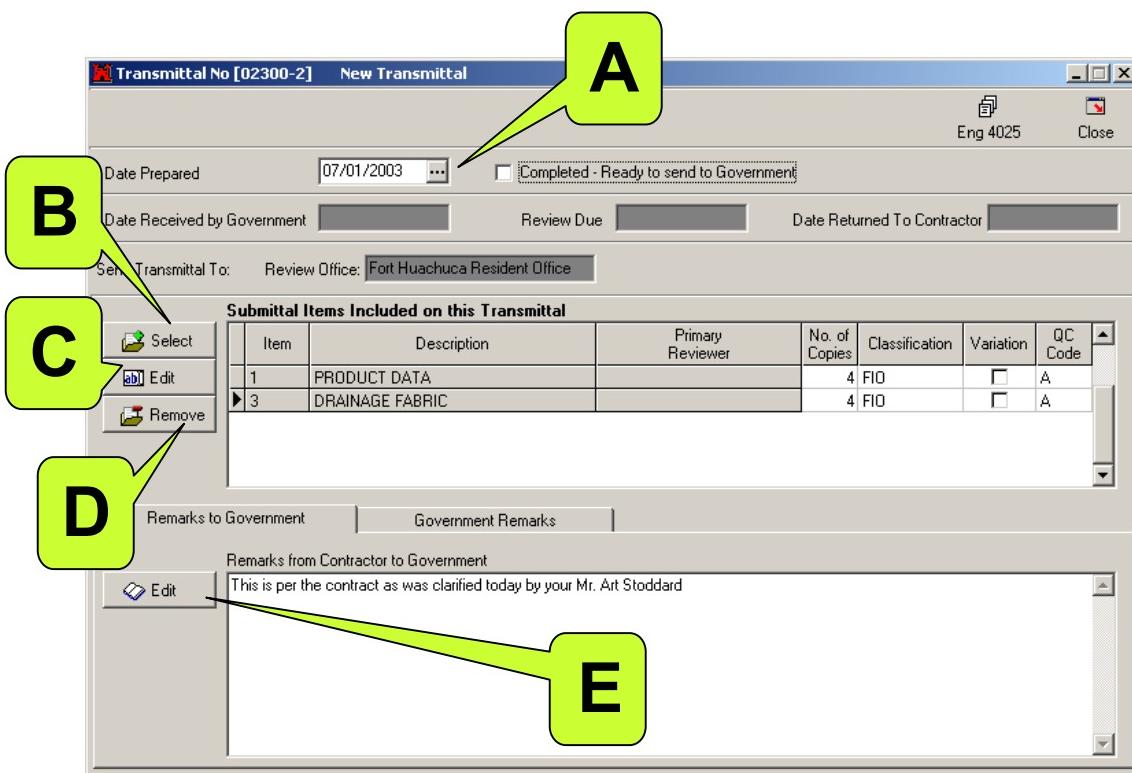
Transmittal Number 03100 - 1.6

OK Cancel

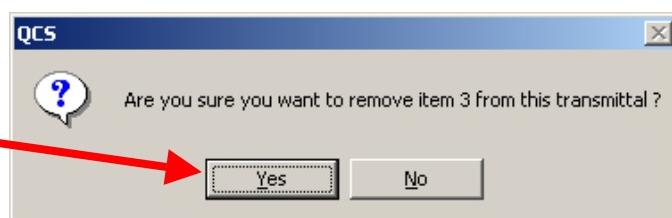
If the first item selected is a RESUBMITTAL, this screen appears.

In both cases above, the Transmittal Number can be changed. The first set of numbers, that represent the specification section, cannot be changed.

This screen is used to complete the preparation of the transmittal package.



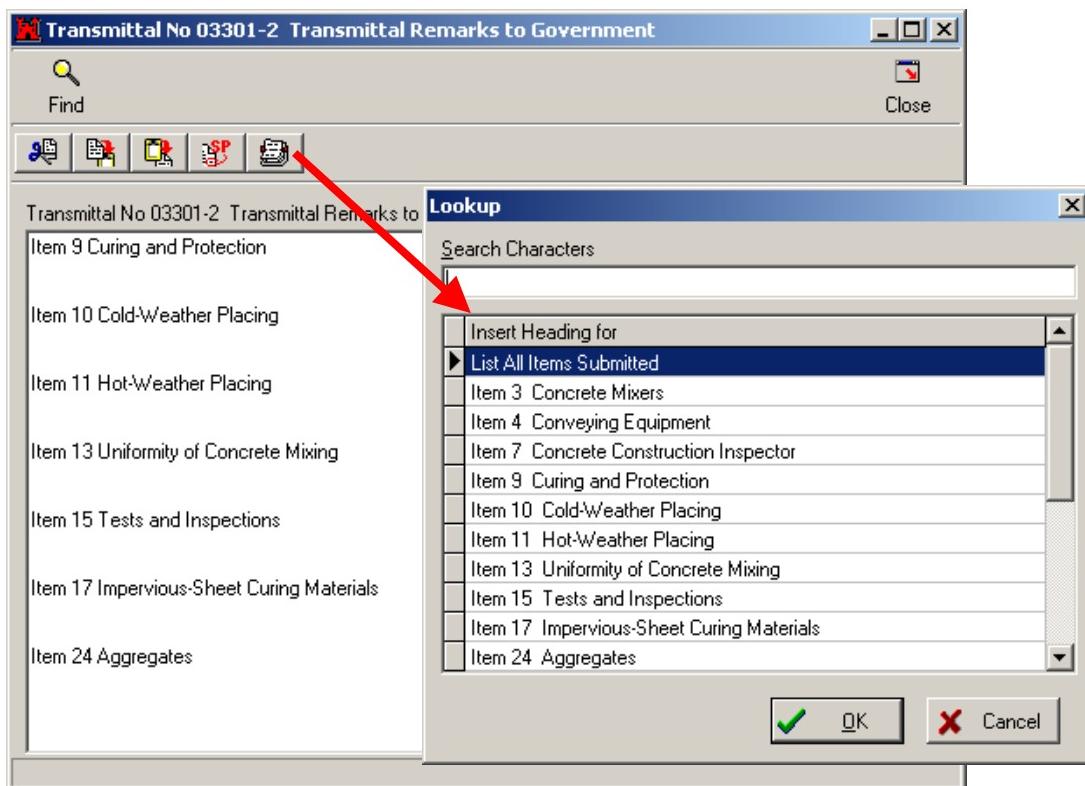
- A.** **Date Prepared.** This is the default date entered. It may be changed if required.
- B.** **Select.** If you have an item that was inadvertently missed on the list, the Select button will return you to the screen showing **Outstanding Submittals** and you can add it at this point.
- C.** **Edit (Submittal Item).** This selection will take you directly to the Submittal Item screen, on which you may make changes if required. For example, you may need to change the **Contractor Primary Reviewer**, or change the **Activity** the item is linked to.
- D.** **Remove.** You may remove an item on the list if required.



E. Edit (Remarks to Government). This selection not only gives you the typical Windows © features of **Cut, Copy, Paste**, and **Spell Check**, but also provides a **Lookup** that will list all items that have been selected for this Transmittal. You can use these as a "header" for any comments you wish to make.

To enter **Transmittal Remarks to Government**, you may type directly in the field at the bottom of the screen or, alternatively, push the **EDIT** button for a larger area in which to type.

Lookup Window for Submittal Items on the Transmittal



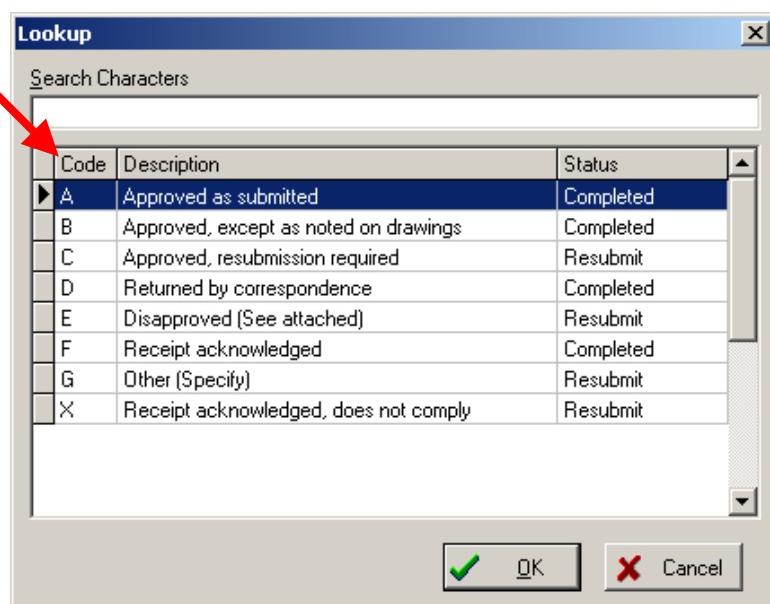
Item	Description	Primary Reviewer	No. of Copies	Classification	Variation	QC Code
1	Electrical Dwg - J		0	FIO	<input type="checkbox"/>	
58	Tests, Fiber Optic		0	GA	<input type="checkbox"/>	
65	Test Forms, Motor		0	GA	<input type="checkbox"/>	

F. **No. of Copies.** Indicate the number of copies you are providing to the Government for this Transmittal.

G. **Classification.** This column advises that the Submittal Item is labeled "For Information Only" (FIO) or, for "Government Action" (GA).

H. **Variation.** If a Variation is intended by this Transmittal is must be indicated here. If a Contractor submits an item that varies from the specified product or condition, he is responsible to point out that **Variation** and provide an explanation of the **Variance** apart from a simple **CHECKMARK**. **If an item does vary, and the Contractor has explained it, approval of the item by the Government constitutes an acceptance of the variance.** It could be that a modification to the contract (credit or debit) is required if the variation is considered significant. Therefore, the Government should ALWAYS carefully review any variance during the submittal process.

- I. **QC Code.** Indicate the “grade” given by the Quality Control Manager for this item. The options are shown in the lookup, as follows.



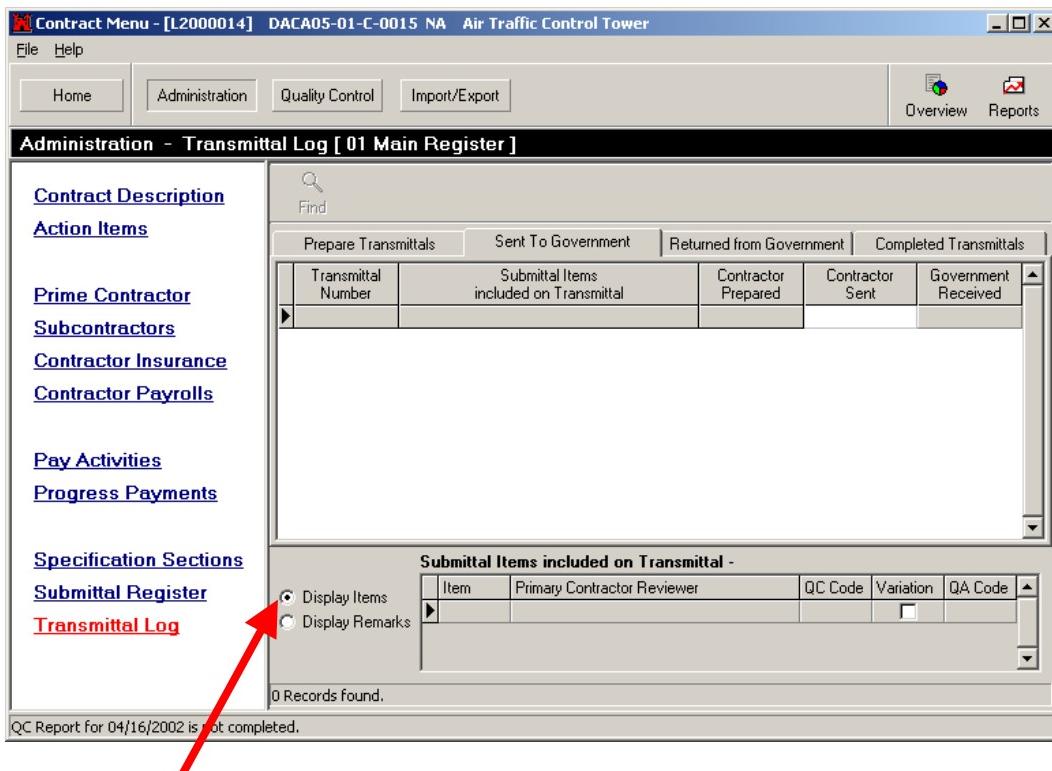
Duh! The QC Code Isn't ALWAYS an "A" !!!

There are Prime Contractor's that do submit Transmittals with other than the "A" Code. Many Contractors use the code "B" when something requires clarification. Other Prime Contractors have also submitted a code "E" for an item from a Subcontractor and the Prime desires the Government to be aware that they grading the submittal accurately and seeking correction. This is especially useful for long lead items.

- J. **Completed - Ready to Send to Government.** When you have completed all action on this screen, indicate you are complete by checking this box. The Transmittal will then be transferred to the Government RMS program with your next Export.

Sent to Government

Prepared Transmittals that have been completed by the Contractor and sent to the Government are reflected on this screen. Simply select the date sent.



At the bottom of each screen you have the option to Display either the Item Numbers or the Remarks associated with each of the Transmittals.

Returned from Government

Transmittals that have been Sent to the Government and the Government has taken approval/disapproval action on it and returned it to the Contractor is reflected on this tab. The dates are automatically imported electronically with the next import from the Government RMS program. Enter the date you received the Transmittal from the Government in this block.

Submittal Items included on Transmittal -						
<input checked="" type="radio"/> Display Items	Item	Primary Contractor Reviewer	QC Code	Variation	QA Code	▲
<input type="radio"/> Display Remarks						▼

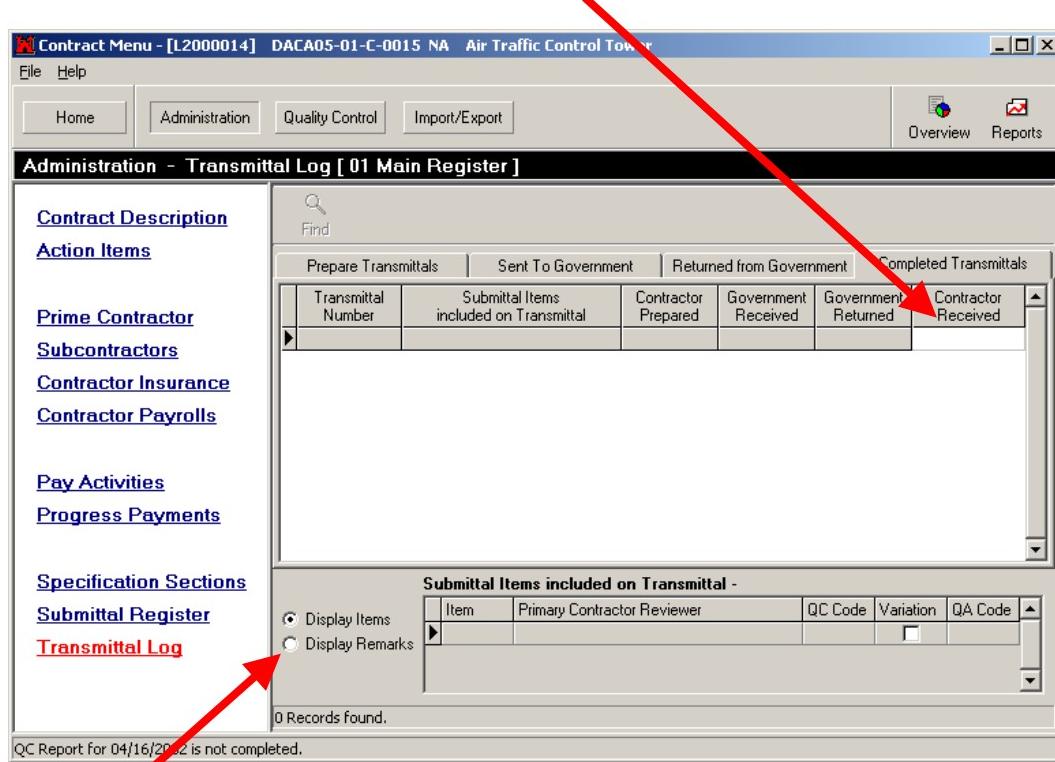
Record 1 of 25

QC Report for 04/16/2002 is not completed.

At the bottom of each screen you have the option to Display either the Item Numbers or the Remarks associated with each of the Transmittals.

Completed Transmittals

Transmittals that have been returned by the Government and acknowledged as received by the Contractor are reflected on this screen. The date field is to indicate the completed transmittal was received by the Contractor.



At the bottom of each screen you have the option to Display either the Item Numbers or the Remarks associated with each of the Transmittals.

Reports for Transmittals

The **REPORTS** button is used to preview and print the Submittal Register (*ENG Form 4288*) and Transmittal Form (*ENG Form 4025*).

The screenshot displays two windows from a software application:

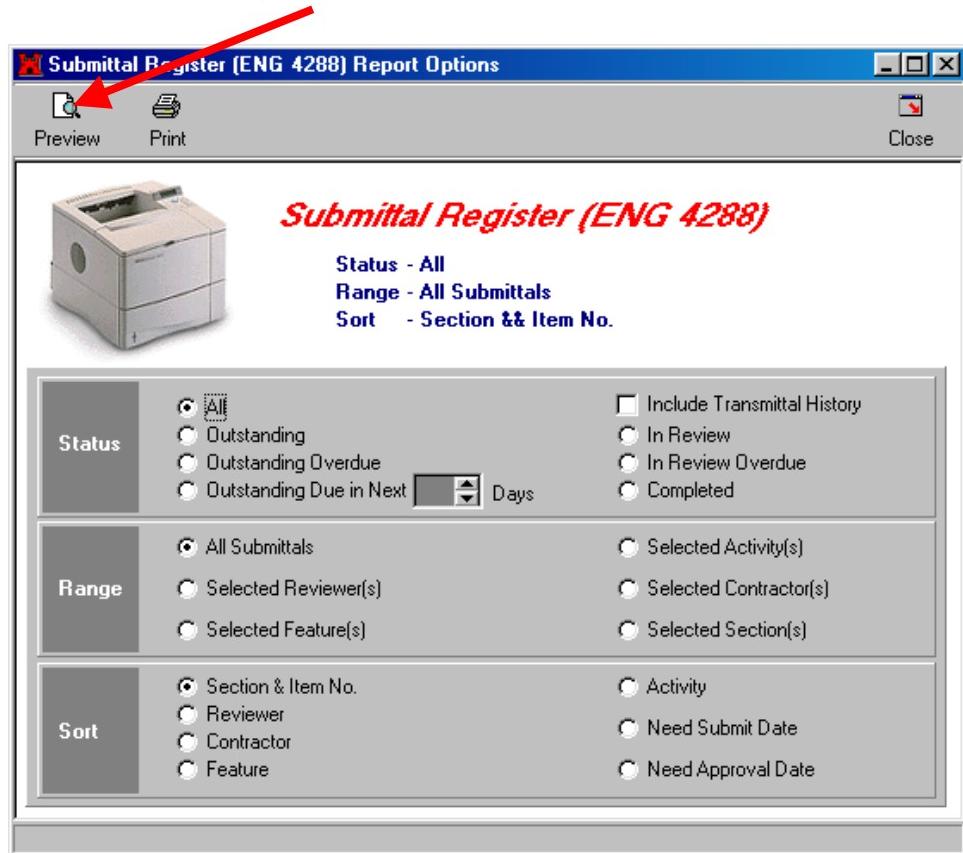
- Contract Menu - [NRDACA01-99-C-0033] DACA01-99-C-0033 NA Design/Constr Family Housing, Area 4**: This window shows a list of transmittals in a grid format. One transmittal, "02713-1", is selected. The grid columns include Transmittal Number, Submittal Items included on Transmittal, Date Prepared, Government Received, and Government Returned.
- Report Menu**: This window contains a sidebar with links to "Contract Reports" and "Submittals". Under "Contract Reports", there are links to Administration, Finances, Quality Control, Submittals, and Schedules. The "Submittals" link is highlighted with a red arrow. The main pane of the Report Menu shows a printer icon and links to "Submittals Register (ENG 4288)" and "Transmittal Sheet (ENG4025-R)".

A red arrow points to the "Submittals" link in the sidebar of the Report Menu window.

Highlight Submittals on the left of the window and preview the forms. The following pages show the steps necessary to retrieve the reports for this sample contract.

Selecting the Submittal Register Report

There are over 100 combinations of reports you can select, depending on your indication of the various status, ranges and sorts. We will select the combination shown below (default), and push the **Preview** button at the top of the window.

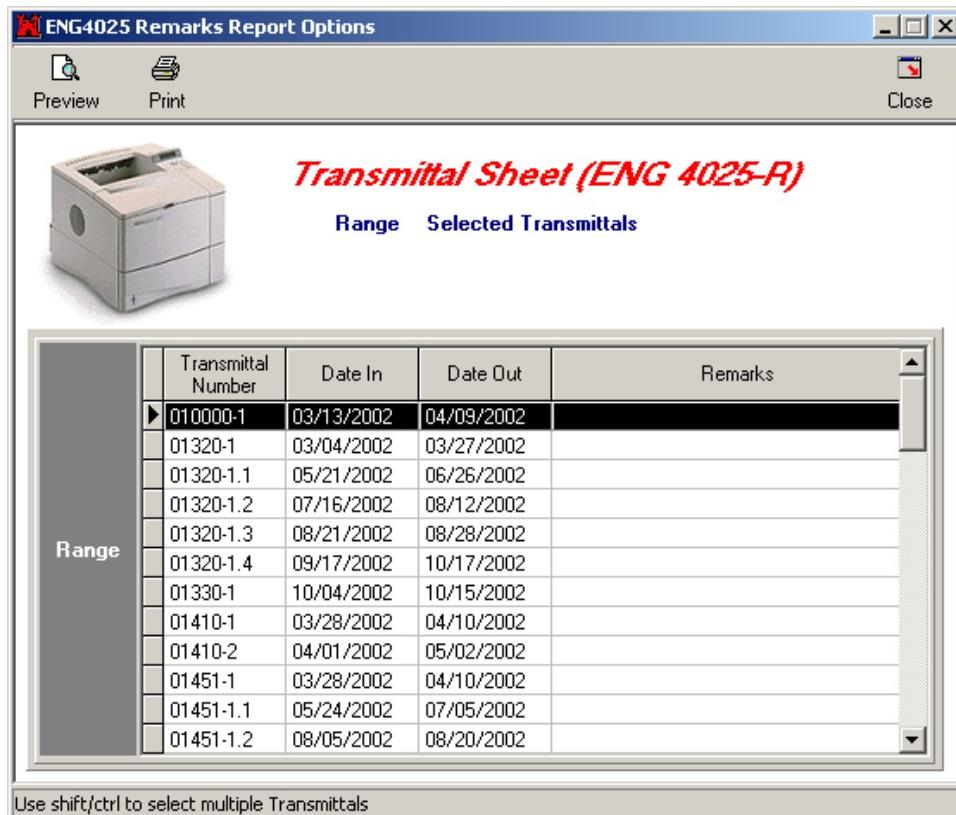


Sample Register Report

SUBMITTAL REGISTER (ER 415-1-10)				TITLE AND LOCATION				DATE						
				CONTRACTOR		Design/Constr Family Housing, Area 4,Redstone Arsenal, AL		05 Sep 2001						
ACTIVITY NUMBER	TRANS-MITTAL NUMBER	ITEM NUMBER	SPECIFICATION PARAGRAPH NUMBER	DESCRIPTION OF SUBMITTAL	TYPE OF SUBMITTAL	CLASSIFICATION	REVIEWER	CONTRACTOR SCHEDULE DATES			CONTRACTOR ACTION		GOVERNMENT ACTION	
								SUBMIT NEEDED BY	APPROVAL NEEDED BY	MATERIAL NEEDED BY	CODE	SUBMIT TO CORPS	CODE	DATE
		2	01451 1.1.5	Construction Office Trailer & Compound	SHOP DRAWINGS	X							13 Sep 99	B 16 Sep 99
		5	01451 3.2.2	CQC Plan	DATA	X							07 Feb 00	A 18 Feb 00
		7	01451 3.4.3	CQC System Manager	DATA	X							A 15 Oct 99	B 10 Nov 99
		8	01451 3.4.3	CQC System Manager(Alternate)	DATA	X							A 15 Oct 99	B 10 Nov 99
SECTION - 02050													21 Oct 99	A 29 Oct 99
		9	02050	Demolition Plan	DATA	X								
SECTION - 02085														
		1	02085	Test Reports	REPORTS	X								
		2	02085	Certification	CERTIFICATES	X								
SECTION - 02090														
		1	02090	Lead-Based Paint Abatement and Disposal	CERTIFICATES	X								
SECTION - 02200														
		1	02200	Test Reports	REPORTS	X							04 Feb 00	F 18 Feb 00
		2	02200	Earthwork Certificates	CERTIFICATES	X								
		3	02200 20.1	Moisture Density - Lookout Pit	RPTS/TESTS	X							17 Feb 00	F 18 Feb 00
		4	02200 2.01A	Moisture-Density Relationship Test	RPTS/TESTS	X							01 Mar 00	F 16 Mar 00
		5	02200 2.01	Moisture-Density Relationship Test Wesso	RPTS/TESTS	X							13 Apr 00	
		6	02200 2.01	Moisture-Density Test Dyer Circle Utilt	RPTS/TESTS	X							13 Apr 00	
SECTION - 02400														
		1	02400 2.01	Storm Drainage	DATA	X							22 Feb 00	F 16 Mar 00
SECTION - 02713 Bituminous Base Course														
		1	02713 2.01	Water Distribution Systems	DATA	X							18 Apr 00	A 19 Apr 00
SECTION - 02722 Graded-Crushed-Aggregate Base Course														
		1	02722 2.01	Sanitary Sewers	DATA	X							16 May 00	F 16 May 00
SECTION - 03300 Cast-in-Place Structural Concrete														
		1	03300 1.02	Materials and Mix Designs	PRODUCT DATA	X							14 Mar 00	A 22 Mar 00
		2	03300 1.02	Reinforcement Shop Drawings	SHOP DRAWINGS	X							14 Mar 00	A 22 Mar 00
		3	03300 1.02	Test Reports	RPTS/TESTS	X								
		4	03300 1.02	Vapor Barrier	TECH DATA	X							14 Mar 00	A 22 Mar 00
		5	03300	Curing Compound	DATA	X							14 Mar 00	A 22 Mar 00
SECTION - 06100 Rough Carpentry														
		1	06100 1.02	Treatment Certification	CERTIFICATES	X							A	
		2	06100 1.03	Product Data	DATA	X								
005	1	3	06100 3	Striping Template	DATA	X	Henry						G	
SECTION - 06192														
RANGE: ALL													SORT : SECTION & ITEM	

Selecting the Transmittal Form

For this report, you select the individual ENG Form 4025 you wish to preview or print. You may also use the [Shift] and [Control] keys to select multiple transmittals. We will select the item shown below and push the **Preview** button at the top of the window.



Sample ENG Form 4025 for Transmittal Form

TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATA, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE (Read instructions on the reverse side prior to initiating this form)				DATE 08/31/2001			TRANSMITTAL NO. 06100-1			
SECTION I - REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS (This section will be initiated by the contractor)										
TO:		FROM: Amer Renov & Constr Co. 3645 Camino Del Rio South San Diego, CA 92108-4004		CONTRACT NO. NRDACA01-99-C-0033			CHECK ONE: <input checked="" type="checkbox"/> THIS IS A NEW TRANSMITTAL <input type="checkbox"/> THIS IS A RESUBMITAL OF TRANSMITTAL			
SPECIFICATION SEC. NO. (Cover only one section with each transmittal) 06100		PROJECT TITLE AND LOCATION Design/Constr Family Housing, Area 4 Redstone Arsenal, AL					CHECK ONE: THIS TRANSMITTAL IS FOR <input checked="" type="checkbox"/> FIO <input type="checkbox"/> GOVT. APPROVAL			
ITEM NO.	DESCRIPTION OF ITEM SUBMITTED (Type size, model number/etc.)			MFG OR CONTR. CAT., CURVE DRAWING OR BROCHURE NO. (See instruction no. 8)	NO. OF COPIES	CONTRACT REFERENCE DOCUMENT		FOR CONTRACTOR USE CODE	VARIATION (See Instruction No. 6)	FOR CE USE CODE
	a.	b.	c.			d.	e.			
1	Treatment Certification				3	1.02		A		
3	Striping Template				3	3	C-3C	G		
REMARKS Item No 3. (Striping Template) is a variation from the contract. The Corps inspector requested we use the kind submitted due to problems encountered on a previous contract. Additional costs may be required, as the substitute is more costly than that which we bid.							I certify that the above submitted items have been reviewed in detail and are correct and in the strict conformance with the contract drawings and specifications except as otherwise stated.			
NAME AND SIGNATURE OF CONTRACTOR										
SECTION II - APPROVAL ACTION										
ENCLOSURES RETURNED (List by item No.)				NAME, TITLE AND SIGNATURE OF APPROVING AUTHORITY			DATE			

ENG FORM 4025-R, MAR 95

(ER 415-1-10)

EDITION OF SEP 93 IS OBSOLETE.

SHEET 1 OF 1

(Proponent: CEMP-CE)



ENG Form 4025-R is formally titled: "TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATA, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE"

Recap

Why would we use the Submittal feature of QCS, or what will we have gained if we do use it? What good is all this stuff anyway?

These are questions you may hear occasionally from some of our less enthusiastic CQC staff, and even the Government QA staff. Here are some items that QCS and RMS will help in this process to make our work easier and are a recap of what has already been discussed in this chapter.

Identify Requirements (Register)

1. The Designer of the project is responsible to create the initial Submittal Register (Eng Form 4288). The Designer may be an independent A/E, Government Designer, or a Contractor (Design-Build).
2. Submittals should be tailored to fit the requirements of the project and should be limited to those necessary for adequate quality control.
3. The importance of an item in the project should be one of the primary factors in determining if a formal submittal for the item should be required.

Electronic Transfer of Data (SpecsIntact)

1. Corps of Engineers Guide Specifications is designed to be used with SpecsIntact, a personal computer-based system for the production of contract specifications.
2. SpecsIntact is an effective tool that has been evolving and improving since Headquarters adopted the system in 1987 as the official means for producing and maintaining our guide specifications.
3. The use of SpecsIntact is mandatory for production of contract specifications for all FY 00 and future projects (Civil and Military). The UFGS (Unified Facilities Guide specifications) is required by regulation. (The Under Secretary of Defense, memorandum of 29 May 2002.
<http://www.hnd.usace.army.mil/techinfo/ufgs/ufgstdod.pdf>
4. The SPECSINTACT program is available on the Internet at:
<http://si.ksc.nasa.gov/specsintact/index.asp>

It should also be noted that the QCS (and the Government RMS) program will directly import a submittal register from an Excel spreadsheet.

One of the most important tasks, and one that should not be overlooked, is to ensure that the Designer uses the proper Specification Section Number and Title as listed in the latest Index for UFGS Guide Specifications. The index is found at “**UFGS Index**”:

<http://www.ccb.org/ufgs/ufgs.htm>

Scheduling (timely flow of materials)

(It is a Contract Requirement!)

1. CEGS 01330, paragraph 3.2: “Submittal Register. The approved submittal register will become the scheduling document and will be used to control submittals throughout the life of the contract”.
2. CEGS 01330, paragraph 3.2: “Submittal Register. The submittal register and the progress schedules shall be coordinated”.

Review and Approval (tracking)

(Contractors have an Incentive!)

1. CEGS 01330, paragraph 1.5: “Withholding of Payment. Payment for materials incorporated in the work will not be made if required approvals have not been obtained”.
2. CEGS 01330, paragraph 3.2: “Submittal Register. The Contractor shall keep the register up-to-date and submit it to the Government together with the monthly payment request”.

Transfer Records to Customer

1. ER 415-345-38, “Transfer and Warranties”, is the basic regulation which prescribes USACE policy and procedures for transfer of completed construction projects.
2. Transfer of construction to the Using Service will be simultaneous with the acceptance of the construction from the Contractor.

Once you have completed one or more transmittals, export the QCS program to the Government RMS program. The Government will annotate their approval or disapproval actions and export back to the QCS program. This will refresh the QCS data with the latest actions on all items.

Chapter 5 - Schedules & the SDEF

What you will learn from this Chapter

Contractor Schedule Requirements



- Overview
- Far Clause 52.236-15
- Gantt Chart
- Network Analysis System (NAS)
- Standard Data Exchange Format (SDEF)
- Commercial Scheduling Programs
- A Contractor's Guide to the SDEF
- QCS and the SDEF (CEGS 01312)
- Contract Specified Project Schedule (CEGS 01320)
- Activity Schedule
- Feature Schedule

Schedules and the SDEF



Overview

This chapter furnishes information on **Schedules** and the **Standard Data Exchange Format** and provides instructions for utilizing the associated modules of the QCS program.

“Schedule!” The very word can be **frightening**. The dictionary provides the following definitions for us:

From “The American Heritage Dictionary”.

1. A printed or often written list of items in tabular form.
2. A program of forthcoming events or appointments.
3. A timetable of departures and arrivals.
4. A production plan allotting work to be done and specifying deadlines.
5. A supplemental statement of details appended to a document.
6. Gantt Chart: A chart designed for comparing rates, as of planned production versus actual production.
7. Bar Chart (Graph): A graph consisting of parallel, usually vertical, bars or rectangles with lengths proportional to specified quantities in a set of data.

From “Means Illustrated Construction Dictionary”.

1. A supplemental listing, usually in chart form, of a project system, subsystem, or drawings.
2. A diagram, graph, or other pictorial or written schedule showing proposed and actual times of starting and completion of the various elements of the work (progress schedule).
3. PERT schedule (An acronym for Project Evaluation and Review Technique.) The PERT schedule charts the activities and events anticipated in a work process.
4. CPM (An acronym for Critical Path Method.) A charting of all events and operations to be encountered in completing a given process. The method is rendered in a form permitting determination of the relative significance of each event, and establishing the optimum sequence and duration of operations.

A Schedule, in QCS or with our construction contracts, can mean all of these things, and much more!

The constraints of cost, time, and the environment leave little room for perfect contract documents or perfect construction conditions. The Contractor is committed to build the project within the constraints of budget, the contract documents, and good construction practices. Any variance from these constraints will cause variations in time and cost. As such, remedies will be sought in the form of changes and, perhaps, claims. The administration of claims and changes is time-consuming, to say the least.

An active role in claim and change management is mandatory to mitigate costs of the Government and the Contractor. Organized procedures, such as schedules, form the backbone of a strong and effective Quality Control and Quality Assurance organization.

Identification of a potential problem is the first and most important phase of the entire change or claim management process. One cannot remedy a problem unless it is known to exist. Very often, identification is automatic, such as a change order initiated by the Government. Most claims situations, however, arise out of subtle differences in field conditions, from jobsite delays or as a result of differences in contract interpretation. In these and all other instances, a problem situation must be recognized and identified as soon as it occurs.

The Critical Path Method (CPM) is a planning and scheduling method that utilizes a network diagram (graphical plot) to show all job operations in a sequential fashion necessary for orderly completion. It is a device utilized by contractors to plan, schedule, coordinate and control work activities on projects in such a manner to enable the contract to be completed in the quickest and most economical fashion possible.

E. I. DuPont de Nemours and Company developed the CPM scheduling technique in the period of 1956-1958 in conjunction with *Univac Applications Research Center of Remington Rand*. The development of CPM scheduling extended one step beyond the then popular bar chart method of scheduling work, since this new method made it possible to display the interrelationships and interdependencies of work activities which control the progress of the work required.



Engineering author Richard H. Clough ** best summarizes what the network diagram does and its advantages: "The network diagram portrays, in simple and direct form, the complex time relationships and constraints among the various segments of a project. It has the tremendous advantage of easily accommodating modifications, refinements, and corrections. It provides the project manager with the following invaluable time-control devices:

1. Provides a means to predict with reasonable accuracy the time required for overall project completion.
2. Makes possible the identification of those activities whose expedient execution is crucial to timely project completion. (These are called critical activities, hence the name of the method.)
3. Serves as a guide for project shortening when the completion date must be advanced.
4. Provides a basis for the scheduling of subcontractors and material deliveries to the job site.
5. Serves as a basis for balanced scheduling of manpower and construction equipment on the project.
6. Makes possible the rapid evaluation of alternative construction methods.
7. Serves as a convenient vehicle for progress reporting and recording.
8. Affords a basis for evaluating the time effects of construction changes and delays."

(** Richard H. Clough, *Construction Project Management* (New York, John Wiley & Sons, Inc., 1972), pp. 7-8.)

CPM schedules are necessarily grounded in pragmatic considerations that govern our activity in the real world of construction. We need to evaluate the CPM with these basic principles in mind:

- A. A schedule is only as good as the information on which it is based.
- B. In a typical construction contract, the work sequences of various trades occur over and over again throughout the contract. Follow-on trades do not wait for the initial trades to complete their work for the entire building prior to commencing the follow-on work; different areas of the project are at different stages of completion within the sequence of work.
- C. Most of our contracts will have essential installations that must receive extra attention even when they are not on the critical path.
- D. Timely completion requires the establishment of flow and momentum. The speed of the installation of various trades is substantially affected by the rhythm of a project. When a smooth flow of the work is scheduled or established, the majority of the activities will probably be very close to the critical path (in terms of float time) since these activities closely precede or follow the activities on the critical path.

FAR Clause 52.236-15

Schedules for Construction Contracts

The Federal Acquisition Regulations (FAR) allows Government contracts to include the aforementioned Clause under the following conditions:

1. Fixed-Price construction contract
2. Contract amount expected to exceed the simplified acquisition threshold
3. Period of actual work performance exceed 60 days
4. May be used with contracts of less than 60 days if an unusual situation exists that warrants imposition of a schedule



The Clause is TYPICALLY NOT BE USED in the same contract with clauses covering other management approaches for ensuring that contractor makes adequate progress.

The Clause is divided into three (3) basic parts:

1. Submission of schedule within five days after work commences.

- The Contracting Officer may insert another period of submission.
- The schedule must be practicable showing the order in which the Contractor proposes to perform the work.

- Must include the start and finish dates of salient features of the work (including acquiring materials, plant, and equipment).
- In the form of a progress chart of suitable scale to indicate the percentage of work scheduled for completion by any given date during the period.
- If the Contractor fails to submit a schedule, progress payment may be withheld.

2. Updating the actual progress on the chart.



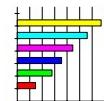
- If Contractor falls behind his approved schedule he shall take steps necessary to improve progress, without additional cost to the Government.
- Contractor may be directed to increase the number of shifts, overtime operations, days of work, and/or the amount of construction plant.
- Contractor may be required to provide supplementary schedule or schedules in chart form to demonstrate how the approved rate of progress will be regained.

3. Remedy for lack of compliance.

- Determination may be made by the Government that the Contractor is not prosecuting the work with sufficient diligence to ensure completion within the time specified in the contract.
- Failure to comply may result in termination.

Gantt Chart

The bar chart (often called the Gantt Chart) is a scheduling device that looks like what its name implies – a “chart of bars” plotted along a time scale.



The bars are used to represent individual items of work (electrical interior, plumbing, foundations, excavating, etc.) and are plotted to a specific time scale. The left end of the bar is placed at the starting point (in time) of the item of work, and the right end shows the completion time of the item of work it represents. Even today, it is the most widely used of all scheduling devices and may be quite satisfactory for some of our simpler contracts.

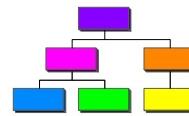
The bar chart, however, has a distinct disadvantage on our major construction contracts. They neglect to indicate the relationship between the various items of work. This limits their ability to identify possible problems areas or any impact that may have already occurred on the items. As contracts become more complex and critical, we need to use a more effective scheduling tool, such as the CPM or NAS.

The interface with QCS and/or RMS and the scheduling system employed makes no difference as to whether it is a bar chart or a full-blown NAS. CEGS-01312, Quality Control System (QCS),

requires the contractor to breakout his work activities so they can be analyzed and tracked to completion. You will be provided the same information, no matter the scheduling system specified in the contract.

Network Analysis System (NAS)

Obtaining quality construction on time and within budget is a primary goal of the U.S. Army Corps of Engineers. In order to manage the time specified for the accomplishment of a project, a schedule may be required on construction contracts. The contractor is responsible for scheduling the work and progress so that the contract completion date is met. The Administrative Contracting Officers (ACO) monitors the contractor's schedule to assure compliance. If a schedule is not provided, the Contracting Officer may withhold progress payments. If actual progress fails to meet the schedule, the Contracting Officer should take appropriate actions to assure compliance with the progress of the work. Therefore, the schedule is vital to effective construction management by the Contractor and the Government.



Regulations allow the Government Staff to choose the type of contract schedule during the design phase. Bar charts can be used to manage simple jobs. When by its nature a construction project or other effort is complex with many interrelated activities, a network schedule may be the most effective tool for analyzing progress, projecting completion, and calculating payment commensurate with actual progress. The determination of applicability of network scheduling is the responsibility of the Contracting Officer. When determined to be applicable, network schedules must be carefully specified, updated regularly, and used effectively. Standard data exchange format shall be used to monitor a contractor's schedule.

A network schedule requires first a logic diagram graphically depicting the sequence and interdependence of the work. It is required to be drawn in the precedence format, and it must accurately represent the intended work sequence and indicate actual constraints. Once the logic diagram is made, an analysis is required which calculates early and late start and finish dates for the activities as well as the spare time or float available to accomplish the activity. Resource data such as cost and responsibility may be entered for activities also. Once calculated, these results can be ordered in different arrangements or sorts and compiled into specific reports for management purposes. Actual progress must be entered once work commences. Based on this progress, revised start and finish dates, and progress payment can be calculated.

Construction schedules after contract award should be contractor prepared in order to involve the contractor in the actual planning. Updates of actual progress should also have contractor participation as well as Government concurrence since the resultant analysis will project early or



Sleep Zone

late contract accomplishment and progress payment due. Changes to the work and occurrences which impact progress must be entered in the schedule logic in order to keep the schedule up to date, to reflect actual job progress, to determine where the contractor must accelerate to regain the schedule when behind due to his/her own actions, and to determine the impact and effect of Government actions on the contractor in order to provide equitable adjustments to the contract time as required.

The contractor should submit his/her NAS within the time required by the specifications. The schedule must be verified as being logical and the completion dates attainable. Failure to enforce this requirement is highly detrimental to project management. Partial payments cannot be processed until an acceptable NAS schedule has been submitted. The Contracting Officer may not allow work to start nor make partial payments until an acceptable schedule (interim or final) is received and approved. Once approved, the schedule must be maintained up to date with regard to job progress and changes. Failure to maintain job progress is fatal to effective schedule management.

NAS can be a valuable tool in contract administration. NAS schedule data can be used to project contract completion, schedule Government actions, incorporate changes and occurrences during execution of the contract, analyze their effect on the contract completion, and arrive at equitable adjustments.

Standard Data Exchange Format (SDEF)

“The Standard Data Exchange Format (SDEF) provides a non-proprietary protocol to exchange project planning and progress data between scheduling systems.” – Bill East (CERL)

The Standard Data Exchange Format provides a consistent format for exchanging scheduling information on construction projects and allows data to be easily transferred between different software programs. It was originally implemented in March 1990, with eight software vendors incorporating the data-exchange protocols into their systems. Since then, changes have been made to clarify differences that occurred when implementing the standard. Revisions included clarification of previously optional activity codes, inclusion of calculated dates, and minor modification to the cost elements.

The SDEF was developed by the U.S. Army Construction Engineering Research Laboratories (USACERL) in conjunction with the Corps of Engineers Headquarters, Corps Field Offices, construction management consultants, scheduling software vendors, and professional associations. It uses a 132-character fixed-field ASCII file to specify the position, length, and definition of both required and optional scheduling information. Fixed-field ASCII file allows contractors to produce the SDEF file with commercial software for large projects or word processing programs for smaller projects.

Implementation of the SDEF made data transfer between the Corps and construction companies easier by establishing a standard format for the exchange of scheduling data. In addition, contractors and subcontractors are able to send and receive electronic scheduling information, creating a simplified communication flow through the construction scheduling process. This capability provides for more efficient project planning and scheduling.

Other Resources for the SDEF

Bill East's Ph.D. Research Work

<http://www.BuildersNet.org/ga/>

RMS, QCS and the SDEF

This guide specification covers the requirements for use of RMS/QCS for contract monitoring and administration. During preparation of the Government Project Management Plan, the project delivery team should have analyzed each project/future contract to decide if use of QCS is necessary. Its use will be appropriate for inclusion in most construction and dredging contracts. However, it may not be necessary nor beneficial to include the QCS requirement in small, simple, short duration contracts/delivery orders for construction, or for other contracts where its use would not be beneficial overall.

NOTE: RMS is to be used for all construction contracts, including those where QCS is not required.



Paragraph 6.5, Schedule, of the Corps Guide Specification states:

"The Contractor shall develop a construction schedule consisting of pay activities, in accordance with Contract Clause "Schedules for Construction Contracts", or Section 01320, PROJECT SCHEDULE, as applicable. This schedule shall be input and maintained in the QCS database either manually or by using the Standard Data Exchange Format (SDEF) (see Section 01320, PROJECT SCHEDULE). The updated schedule data shall be included with each pay request submitted by the Contractor."

**SPEED
BUMP
AHEAD**

NOTE: Primavera is currently the only commercial vendor that is supporting the SDEF in their Windows product. The current version is P3, as reflected on the following screens. There have been numerous attempts, and unsuccessful as far as we know, to write script files for such alternate programs like SureTrak, MS Project, and others.

Contract Specified Project Schedule

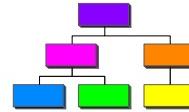
Guide specification 01320 covers the requirements for the preparation and maintenance of the project schedule. Selection of the optional requirements in the specification should have been coordinated to ensure that the schedule requirements are appropriate for the complexity of the work.

Paragraph 3.1, General Requirements, states:

"Pursuant to the Contract Clause, SCHEDULE FOR CONSTRUCTION CONTRACTS, a Project Schedule as described below shall be prepared. The scheduling of construction shall be the responsibility of the Contractor... The approved Project Schedule shall be used to measure the progress of the work, to aid in evaluating time extensions, and to provide the basis of all progress payments."

Paragraph 3.3.1, Use of the Critical Path Method, states:

"The Critical Path Method (CPM) of network calculation shall be used to generate the Project Schedule. The Contractor shall provide the Project Schedule in the Precedence Diagram Method (PDM)."



Caution: When this Guide Specification has been incorporated into your contract, a BAR CHART does not comply with the requirements and should not be approved. A CPM (NAS) must be used to satisfy these contract requirements.

Well, now that we have explored way more than we needed to about schedules and the SDEF, let's look at QCS interfaces with the Contractor's scheduling program.



QCS maintains two types of schedules.

1. A detailed NAS of the contractor's work activities. This is the **Activity Schedule** used at the jobsite to forecast projected need dates for submittals, materials, equipment, work crews, testing schedules, 3-Phase inspections, etc. The level of detail (i.e., form footings, set re-bar, place concrete) is not very useful for the customer or those not tasked with the day-to-day scheduling operations at the jobsite.
2. As part of the contractor's QC Plan, *Defineable Features of Work* for a construction contract are identified by the contractor to plan Preparatory, Initial

and Follow-Up inspections of the work. QCS and RMS generates a **Feature Schedule** by finding the first activity scheduled to start under a feature and the last activity scheduled to be finished under a feature. Actual progress is determined by computing earnings to date on the activities for a feature. Many construction contracts (even those with 1000's to tens of 1000's of work activities) have fewer than 30 features of work. This rolled up **Feature Schedule** makes an excellent schedule for easily monitoring the progress on a contract. The customers find this schedule very easy to understand. Typical features include items like Site Utilities, Interior Electrical, Roofing, etc.

Activity Schedule

This option gives you a quick overview of your **Activity Schedule**. The information in this section is either entered directly into QCS or imported from the scheduling software package. There is an opportunity to review imported data before incorporating it into QCS. Choosing **Activity Schedule** brings up the following screen.

The screenshot shows the 'Quality Control - Activity Schedule' screen. On the left, there is a sidebar with various links: QC Daily Reports, QC Summary, Features of Work, 3-Phase Checks, QC Requirements, Equipment Checks, **Activity Schedule** (which has a red arrow pointing to it), Feature Schedule, and Safety Manual. The main area displays a table of activities:

	Activity Number	Activity Description	Scheduled Start	Scheduled Finish	Actual Start	Actual Finish
▶	900	start project milestone			09/15/1999	
	1000	contract award			09/15/1999	
	1010	Bond Bid Item 0001			09/15/1999	09/28/1999
	1011	Bond, Bid item 0002			09/15/1999	09/28/1999
	1012	Bond bid Item 0003			09/15/1999	09/28/1999
	1013	Bond	02/22/2000		09/14/1999	09/27/1999
	1020	Schedule of prices			09/15/1999	02/17/2000
	1030	SAFETY PLAN			09/15/1999	09/28/1999
	1040	Shedule CPM			09/15/1999	10/04/1999
	1050	QC Plan, Interim			09/15/1999	11/01/1999
	1052	QC PLAN			09/15/1999	09/28/1999
	1055	ENVIRONMENTAL PLAN	02/23/2000		11/16/1999	02/23/2000
	1060	TEST SOILS AT SITE	02/23/2000		10/13/1999	10/15/1999
	1070	Pre-construction Meeting			10/06/1999	10/06/1999
	1200	Survey for Rough Grade			12/17/1999	12/28/1999
	1240	Weekly QC Meetings			02/01/2000	09/18/2002
	1245	QC manager			02/01/2000	

Enter schedule and Actual dates

Changes can be made to the *dates* from this screen, or as a part of the **Daily Quality Control Report**, from which the dates are typically either imported from the Contractor's NAS or manually updated. The *actual dates* are imported the Contractor's Daily QC Report and cannot be changed after export to the Government.

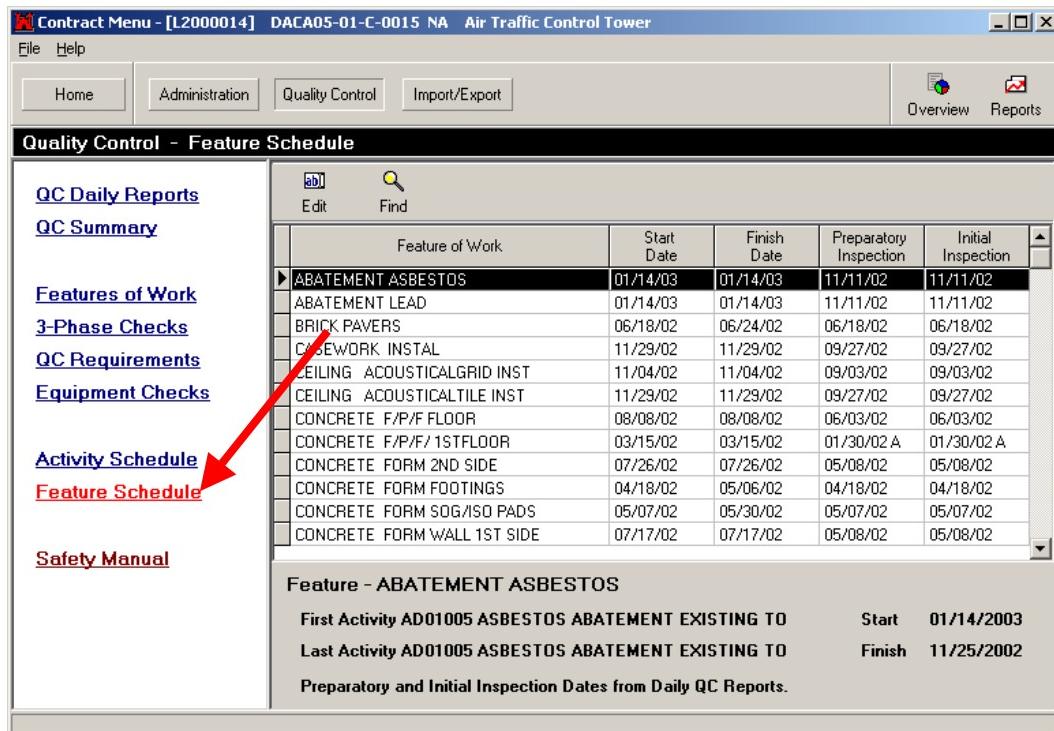
Feature Schedule

The Contractor's Quality Control Plan requires that the contract be organized according to **Definable Features of Work**. The **Definable Features of Work** are assigned to specific activities in the schedule so that preparatory, initial and follow-up inspections may be scheduled.

As **Definable Features of Work** are required to be identified by the Contractor as part of his Quality Control program, this **Feature Schedule** of QCS is used to track and report when the **Preparatory and Initial 3-Phase Inspection Control Meetings** are scheduled and actually conducted.

- All Contractor Activities must be assigned to one and only one Definable Feature of Work.
- The Definable Feature of Work may have MANY Activities linked to it.
- The Definable Features of Work in the Quality Control Plan must match those in the Scheduling program.

The Feature Schedule can be accessed from the main **Contract Menu / Administration / Feature Schedule** as shown below.



The screenshot shows the 'Contract Menu - [L2000014] DACA05-01-C-0015 NA Air Traffic Control Tower' window. The 'Administration' tab is selected. On the left, a sidebar lists navigation links: QC Daily Reports, QC Summary, Features of Work, 3-Phase Checks, QC Requirements, Equipment Checks, Activity Schedule, and Feature Schedule (which is highlighted with a red arrow). The main area displays a table titled 'Quality Control - Feature Schedule' with columns for Feature of Work, Start Date, Finish Date, Preparatory Inspection, and Initial Inspection. Below the table, a detailed view for 'ABATEMENT ASBESTOS' shows the first and last activity dates and inspection details.

Feature of Work	Start Date	Finish Date	Preparatory Inspection	Initial Inspection
ABATEMENT ASBESTOS	01/14/03	01/14/03	11/11/02	11/11/02
ABATEMENT LEAD	01/14/03	01/14/03	11/11/02	11/11/02
BRICK PAVERS	06/18/02	06/24/02	06/18/02	06/18/02
CASEWORK INSTAL	11/29/02	11/29/02	09/27/02	09/27/02
CEILING ACOUSTICALGRID INST	11/04/02	11/04/02	09/03/02	09/03/02
CEILING ACOUSTICAL TILE INST	11/29/02	11/29/02	09/27/02	09/27/02
CONCRETE F/P/F FLOOR	08/08/02	08/08/02	06/03/02	06/03/02
CONCRETE F/P/F/ 1STFLLOOR	03/15/02	03/15/02	01/30/02 A	01/30/02 A
CONCRETE FORM 2ND SIDE	07/26/02	07/26/02	05/08/02	05/08/02
CONCRETE FORM FOOTINGS	04/18/02	05/06/02	04/18/02	04/18/02
CONCRETE FORM SOG/ISO PADS	05/07/02	05/30/02	05/07/02	05/07/02
CONCRETE FORM WALL 1ST SIDE	07/17/02	07/17/02	05/08/02	05/08/02

Feature - ABATEMENT ASBESTOS

First Activity AD01005 ASBESTOS ABATEMENT EXISTING TO Start 01/14/2003
Last Activity AD01005 ASBESTOS ABATEMENT EXISTING TO Finish 11/25/2002
Preparatory and Initial Inspection Dates from Daily QC Reports.

Features of Work can be considered as a general category of construction work that is referenced in the contract specifications. A feature can also be thought of as any phase of work

requiring a preparatory inspection. In QCS they are tied to work types that are tied to three phase inspection checks. As such, they are an integral part to the power of QCS to print inspection worksheets and should be thought through carefully. The dates are captured from the QC Daily Report or may be entered here.

Chapter 6 – Progress Payments

What you will learn from this Chapter

Progress Payments



- Overview of Chapter Contents
- Far Requirements for Prompt Payment
- Adding a Pay Period
- Entering Requested Earnings
- Importing the Pay Request
- Additional Earnings
- Stored Materials
- Preparatory Work
- Performance and Payment Bonds
- Subcontractor Deductions
- Exporting the Pay Request
- Payment Reports

Overview



The QCS program allows the contractor to submit progress payments with the exchange of data electronically with the government. The actual exchange process is the subject of the next chapter in this manual. This chapter will address the payment process within the QCS program.

The **Progress Payments** module allows you to track all the aspects of payments on the contract. The Contractor submits a request for payment by **Pay Activities**. The request can either be for a specific dollar amount, or for a percentage of the pay activity amount or quantity. The Contractor and Government Representative should jointly review the Contractor's request, check for any outstanding requirements and determine what the allowed amount will be (again, using either specific dollars or a percentage). Retained percentages are also taken into consideration.

In accordance with Contract Clause, "Prompt Payment for Construction Contracts", the Prompt Payment Act (PPA) (this is a Public Law 100-496 and has been in effect since April 1, 1989), payments are required to be made within 14 calendar days of receipt of a proper invoice. When submitting the pay request, **MAKE SURE** it is accompanied by a "**certification**" as specified in the contract. The office receiving the payment request is obligated to ensure that it is correct and, if not, return it to the Contractor within 7 calendar days, otherwise it will be assumed to be correct and interest will be paid if a late payment takes place

Progress Payment are located under the heading **ADMINISTRATION** from the **Contract Menu**.

Contract Menu - [G4000107] DACW68-03-C-0002 NA Fish Ladder Exit Modifications

File Help

Home Administration Quality Control Import/Export Overview Reports

Administration - Progress Payments

Contract Description

Action Items

Prime Contractor

Subcontractors

Contractor Insurance

Contractor Payrolls

Pay Activities

Progress Payments

Specification Sections

Submittal Register

Transmittal Log

Request Earnings on Current Pay Estimate

Invoice No	From	Thru	Earnings This Period	Earnings to Date	Paid to Date
1	11/06/2002	12/27/2002	\$14,209.00	\$14,209.00	\$14,209.00
2	12/28/2002	02/04/2003	\$196,046.00	\$210,255.00	\$210,255.00
3	02/05/2003	03/28/2003	\$38,787.50	\$249,042.50	\$249,042.50
4	03/29/2003	05/28/2003	\$5,101.00	\$254,143.50	\$254,143.50
5	05/29/2003	06/28/2003	\$6,030.00	\$260,173.50	\$260,173.50

Prior to submitting any progress payment, verify that all finances are balanced. This includes CLIN's and Payment Activities.



FAR Requirements for Prompt Payment

- The “designated billing office” is defined as the office or person designated in the contract to first receive the contractor’s invoice or request for payment. In most cases, this will be the Area, Resident or Project Office that is administrating the construction contract on behalf of the Corps of Engineers.
- A “proper invoice” is defined by FAR clause 52.232-27(a)(2) and must include, among other items, “substantiation” of the amounts requested and “certification” in accordance with the requirements of clause 52.232-5. Payment will not be made without contractor substantiation of the amounts requested and certification that previous amounts were expended in accordance with the contract, subcontractors and suppliers have been paid from previous payments and will be paid promptly from the payment requested, and that the prime contractor’s payment request does not include any amounts to be withheld or retained from a subcontractor. The certification must appear exactly as stated in the aforementioned clause and be fully executed by the contractor. The degree of substantiation required will depend upon the type of work involved and will be left to the discretion of the Contracting Officer. In most cases, however, an update of the approved contract price breakdown indicating itemized completion percentages that were established by mutual agreement between government and contractor contract personnel would constitute substantiation of work-in-place.
- If an invoice is found to be improper or defective, as defined by 52.232-27(a)(2), the contractor must be notified of the defect within 7 days after receipt of the invoice. It is recommended that the initial notification be placed telephonically (see clause 52.232-27(a)(2)(vii) and then confirmed in writing. The “clock” is effectively stopped upon notification of the defect and the whole process starts over with the resubmission of the corrected invoice. Disagreement between the Government and the Contractor over the payment amount, issues of contract compliance or retainage does not form the basis for finding the invoice to be defective and requiring resubmission. However, since clause 52.232-27(a)(4)(iv) states that “Interest penalties are not required on payment delays due to disagreement....” it is imperative that the ENG Form 93 be annotated to document the delay and alert the designated payment office not to pay interest during the delay period.
- If the Government takes longer than 7 days to notify the contractor of an invoice defect, the subsequent payment period for processing the corrected invoice is shortened by the number of days that the Government exceeded the 7 day requirement (e.g., if the specified due date is 14 days after receipt, and the Government takes 10 days to notify the Contractor of a defect, payment of the corrected invoice is due 11 days after receipt).
- The due date for progress payments shall be 14 days after receipt of a proper payment request. This requirement is contained in P.L. 100—496 and is not subject to negotiation. The FAC (Federal Acquisition Circular 84-45) does provide for making a determination as to a contract or class of contracts and specifying, in the solicitation, “a period longer than 14 days if required to afford the Government a practicable opportunity



to adequately inspect the work and to determine the adequacy of the contractor's performance..." The Office of Management and Budget (OMB) Circular A-125 states that, "extended payment periods would not be appropriate... for the mere convenience of government employees, or to avoid any possibility of making late payment." In order to carry out the Congressional intent, determinations to specify longer payment periods shall be made by the Contracting Officer and shall be documented by written justification in the contract file. Current feedback from the field indicated that where ENG Form 93's are transmitted electronically to the payment office, the "50 percent rule" (in the payment office by close of business on the day that represents half the pay period, or in this case, the 7th day) could usually be met.

- The release of retained amounts shall be based on the Contracting Officer's determination that satisfactory progress has been made. Payment is due within 30 days, or other specified period, after release is approved.
- On final payments, we don't have the latitude of specifying a longer payment period. Payment is due either the 30th day after receipt of the invoice or the 30th day after Government acceptance of the work, whichever is later. Where final payment is subject to settlement actions (e.g., release of claims), acceptance is deemed to have occurred the effective date of settlement.
- If a contractor is overpaid (his performance is later found not in conformance with the contract specifications or he has held retainage from a subcontractor and was paid the full amount), the Government is entitled to interest, and the interest must be deducted from the next available payment to the contractor. Although Clause 52.232-5(d) predicates such action upon the contractor's discovery of the "*unearned amount*", there may be instances where it is necessary for the Government to provide information for discovery.
- Another major revision is the addition of some very detailed provisions applying to the payment of subcontractors. The highlights are:
 1. The provisions flow down to subcontractors and suppliers at all tiers. The prime contractor must include a contract clause requiring each of its subcontractors to flow down these same requirements to each of their subcontractors.
 2. Contractors and subcontractors must pay their subcontractors within 7 days of receipt of their respective payment. They may not specify longer payment periods in their subcontracts.
 3. Contractors and subcontractors must pay interest to their subcontractors for payments made after the due date (7th day).
 4. Interest that the contractor pays a subcontractor cannot be charged to the Government.
 5. The Contracting Officer must be provided copies of retainage and withholding notices issued to subcontractors.
- While the sections on payments to subcontractors constitutes a large portion of Clause 52.232-27, the Congress did not indicate it intended to place the Government in an enforcement role between the prime and subcontractor on payment issues. Although the requirements to provide the Contracting Officer with copies of correspondence to

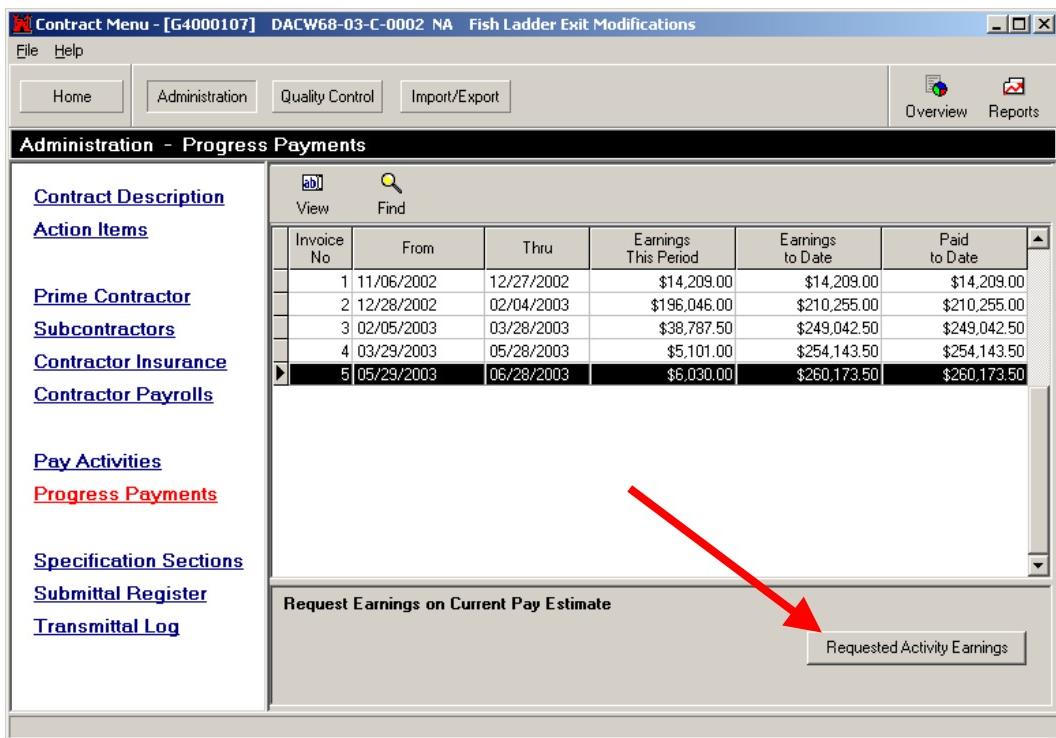
subcontractors may indicate deeper involvement, the Office of the Chief Counsel has confirmed that neither OMB Circular A-125 nor the FAR requires the Government to monitor and enforce activities between the prime and subcontractor as identified in subparagraphs (d) (e) (f) and (g) of Clause 52.232.27. Compliance with subparagraph (c) will be implemented through a mechanism similar to the *Statement and Acknowledgment Form* used in the labor provisions.

Adding a Pay Period

The Progress Payment screen is used to review and /or add pay periods. The process for making payments is a logical one and should be easily understood.

You begin the process by pushing the **Requested Activity Earnings** button located at the bottom right side of the screen.

When you push the **Requested Activity Earnings** button to add a new pay period, QCS present a new screen on which to complete the request. You are able to review the previous pay periods, however, you can only edit the *CURRENT* pay estimate. You may preview all *ENG Form 93's* that have been archived.



Entering Requested Earnings

Payments to the contractor and payment frequency are set forth in the “Payments Under Fixed Price Construction Contracts”, or an equivalent clause of the contract. Frequency of payment is usually specified as monthly, but the pay period should be mutually agreed upon by appropriate Government and Contractor person.

Progress payments are based on the value of acceptable work the Contractor has placed from one pay period to the next. That is, a Contractor is paid according to the percentage or quantity of work that has been satisfactorily completed, or partially completed as the case may be. Preferably, mutual agreement is obtained with the Government and Contractor on progressive earnings through consultation prior to preparing the formal pay request.

The estimate must be arithmetically correct. The Contractor or authorized representative should sign the original before forwarding the final request for payment to the Government. When a NAS is used, it should provide the supporting data for interium pay estimates. When there is an unreconciled disagreement in the amount of contractor earnings, the Government advises the Contractor of the differences and makes the payment

The Contractor may manually enter the requested earnings, or **Import Pay Request** from his scheduling system (e.g., Primavera).

Contractor Requested Earnings - DM-D/B Replace Family Housing, Phase V							
<input type="button" value="Find"/> <input type="button" value="Close"/>							
Activity Earnings		Additional Earnings					
Activity No	Description	Total Quantity		Total Amount	Requested Qty	Req %	Requested Amount
► 10	BONDS	46,648.0000	LS	\$46,648.00	1.0000	100	\$46,648.00
15	SUBMIT 60% UNIT/100% SITE DE	403,497.0000	LS	\$403,497.00	0.9900	99	\$399,462.03
50	SUBMIT ONSITE DEMO DRAWIN	30,000.0000	LS	\$30,000.00	0.9900	99	\$29,700.00
90	BEGIN ONSITE DEMOLITION	160,000.0000	LS	\$160,000.00	0.9900	99	\$158,400.00
95	MOBILIZATION	288,000.0000	LS	\$288,000.00	0.9900	99	\$285,120.00
125	SUBMIT 100% UNIT DRAWINGS	104,463.0000	LS	\$104,463.00	0.9900	99	\$103,418.37
150	STAKING 1	8,849.0000	LS	\$8,849.00	0.9900	99	\$8,760.51
155	STAKING 2	11,680.0000	LS	\$11,680.00	0.9900	99	\$11,563.20
160	STAKING 3	14,865.0000	LS	\$14,865.00	0.9900	99	\$14,716.35
165	CLEAR & GRUB 1	12,500.0000	LS	\$12,500.00	0.9900	99	\$12,375.00
170	CLEAR & GRUB 2	16,500.0000	LS	\$16,500.00	0.9900	99	\$16,335.00
175	CLEAR & GRUB 3	21,000.0000	LS	\$21,000.00	0.0000	0	\$0.00
180	ROUGH GRADE 1	37,500.0000	LS	\$37,500.00	0.0000	0	\$0.00
185	ROUGH GRADE 2	49,500.0000	LS	\$49,500.00	0.0000	0	\$0.00
190	ROUGH GRADE 3	63,000.0000	LS	\$63,000.00	0.0000	0	\$0.00

Total Requested

Payment No. 003 Thru Invoice Date Requested Earnings Completed Yes

Additional Earnings

Occassionally, you may need to request action for additional earnings that are not addressed within the specific pay activities, but for which entitlement is authorized. Or, you may need to make deductions in the pay request for other items as shown below.

The second tab on this screen is entitled “**Additional Earnings**” and is used for the purposes just explained in the previous paragraph.

Activity Earnings				Additional Earnings	
Activity Earnings		Previous Total Earnings	Total Earnings To Date	Estimated Stored Materials Included in Activity Earnings	
Total Requested Activity Earnings to Date		\$1,279,583.11	\$1,279,583.11	\$5,000.00	
Additional Requested Earnings not included in above Activity Earnings					
Additional Stored Material	\$0.00	\$0.00	Preparatory Work	\$0.00	\$0.00
Performance and Payment Bond	\$0.00	\$0.00			
Subcontractor Deductions					
Less Subcontractor Deductions held by Prime	\$0.00	\$0.00			
Sum of Requested Earnings to Date			Accrual this Period		
Total Requested Earnings	\$1,279,583.11	\$1,279,583.11	0.00		
Payment No. 003	Thru 04/23/2003	...	Invoice Date	04/23/2003	...
			Requested Earnings Completed <input type="checkbox"/> Yes		

Stored Materials

There are two different types of stored materials addressed on this screen.

- Stored Materials included in Activity Earnings
- Stored Materials not included in Activity Earnings

A Stored materials that are included in activity earnings could be such items as “gypsum board”. The activity could be labeled as “Drywall” and the gypsum board is an item for that activity and it has been delivered to the jobsite, but not yet incorporated into the work. Any amount listed here will not reduce or increase earnings. Its primary purpose is to reflect accurate progress (percentage) of work actually in place. The earning amount will be reduced by the value of the stored materials prior to computing the actual progress percentage. The amount will ultimately be “ZERO” when all material is incorporated into the work.

B Stored materials that are not included in activity earnings could be such items that have been delivered to the jobsite but not yet incorporated. For example, if you had an activity called "Fencing", the item could be "chain link fabric". The fencing will be paid for by the lineal feet (LF) of installed fence, but none has yet been installed. The fabric is delivered but is not addressed in any specific *Contract Line Item* (CLIN) – formerly called "Bid Items". The amount entered here will be processed IN ADDITION to any activity earnings requested. It would be reduced to "ZERO" as the material is all incorporated.



Amounts entered that are not included in activity earning, MUST BE REDUCED as the material is incorporated and is a part of the actual activity.

Other Earnings not included in Activity Earnings

Similar to the stored material in B, above, there are two other categories of expenses for which payment is authorized in accordance with the Federal Acquisition Regulations (FAR).

- Preparatory Work
- Performance and Payment Bonds

Preparatory Work

Preparatory work is often encountered on UNIT PRICE contracts, where items such as "Mobilization", or "Demobilization" are not specifically addressed as a line item for which payment can be made. Payment may be extended for such costs, but must also be reduced as the work is placed. This amount will be "ZERO" when the contract is complete.

Performance and Payment Bonds

Not unlike "Preparatory Work" in the previous paragraph, Performance and Payment Bonds may be reimbursed as "up-front" costs when not specifically part of a contract line item. This also must be reduced as the work progresses. This amount will also be "ZERO" when the contract is complete.

Subcontractor Deductions

When the Prime Contractor withholds earnings from a Subcontractor, the Government must HOLD the funds on behalf of the Prime Contractor. This is a strict requirement of the *Prompt Payment Act* and must be adhered to.

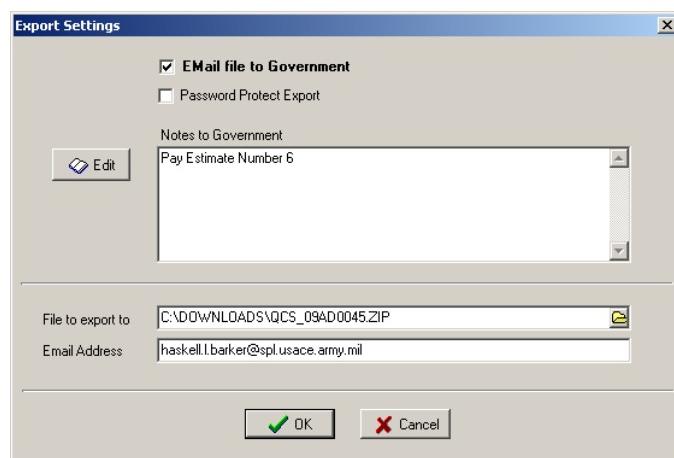
Enter the amount of the withholdings in "C" below. As the amount is returned to the Subcontractor, that amount will be reduced to "ZERO".

Activity Earnings				Additional Earnings	
Activity Earnings	Previous Total Earnings	Total Earnings To Date	Estimated Stored Materials Included in Activity Earnings		
Total Requested Activity Earnings to Date	\$1,279,583.11	\$1,279,583.11	\$5,000.00		
Additional Requested Earnings not included in above Activity Earnings					
Additional Stored Material	\$0.00	\$0.00			
Preparatory Work	\$0.00	\$0.00			
Performance and Payment Bond	\$0.00	\$0.00			
Subcontractor Deductions					
Less Subcontractor Deductions held by Prime	\$0.00	\$0.00			
Sum of Requested Earnings to Date			Accrual this Period		
Total Requested Earnings	\$1,279,583.11	\$1,279,583.11	0.00		
Payment No. 003	Thru 04/23/2003	Invoice Date 04/23/2003	Requested Earnings Completed	<input type="checkbox"/> Yes	

Exporting the Pay Request

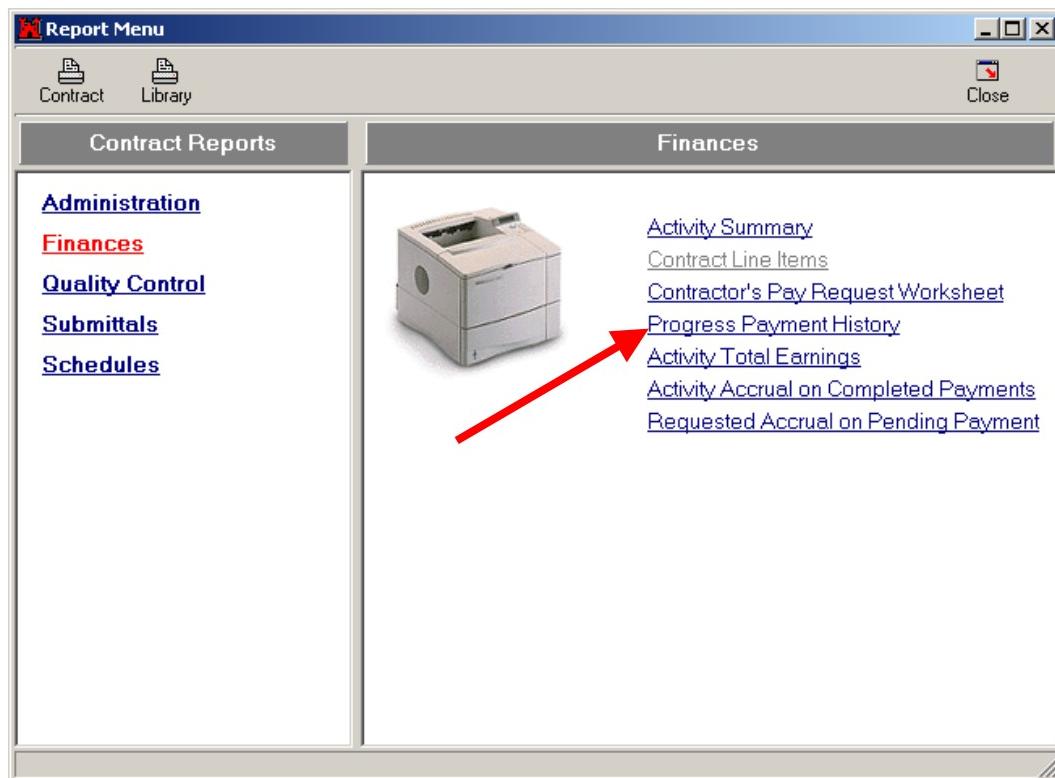
When you are completed with entering the requested earnings (and deductions if appropriate), check the box "Yes" at the bottom right side of the screen. When this is checked, and the request is exported to the Government for processing, no further changes will be possible. All fields, on both tabs, will turn gray.

You are ready to export the pay request to the Government RMS system using the **Import/Export** button on the main Contract Menu.



Payment Reports

Using the REPORTS button you may preview and print the available reports for payments for the contract. One of the reports available is the “Progress Payment History” report. The report is included on the next page for your information.



Progress Payment History - Report



Progress Payment History

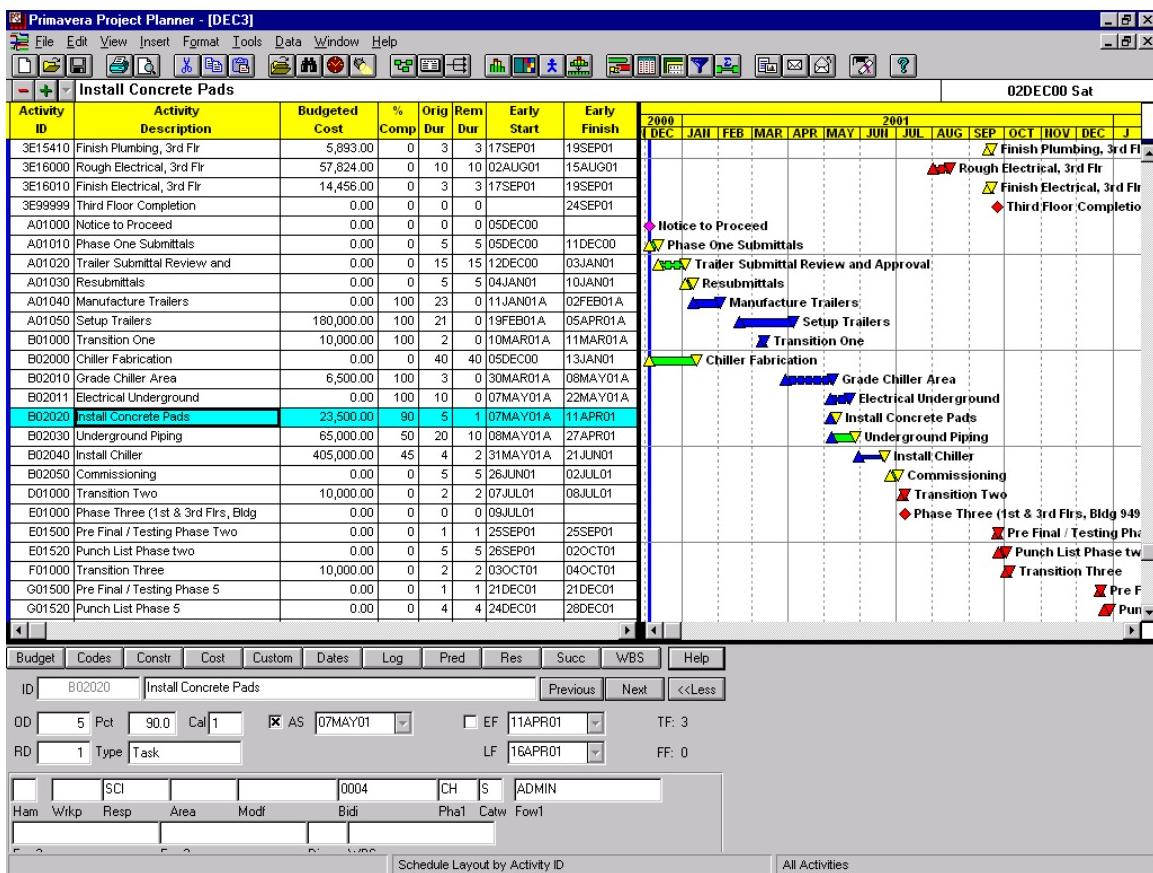
05 Sep 2001

Design/Constr Family Housing, Area 4
DACA01-99-C-0033 NA

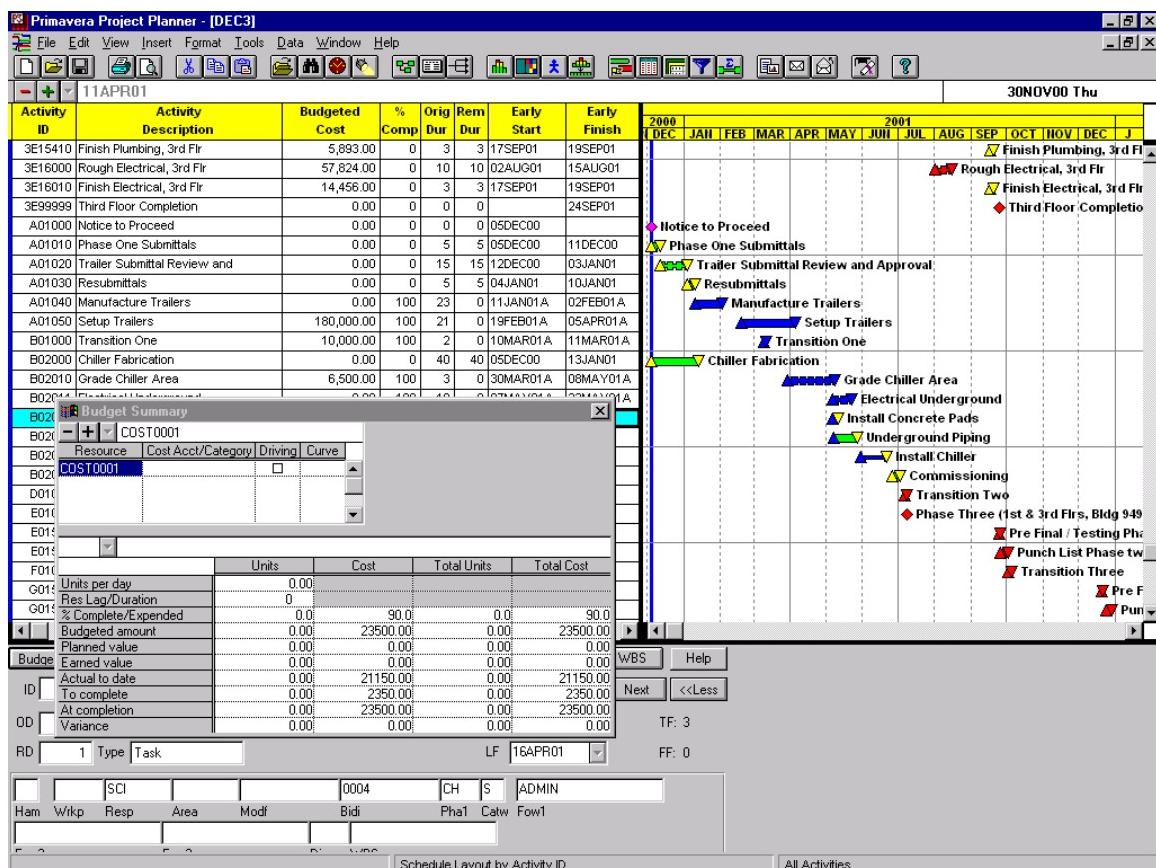
Redstone Arsenal, AL

TITLE AND LOCATION: Design/Constr Family Housing, Area 4 Redstone Arsenal, AL									
CONTRACTOR: Amer Renov & Constr Co.			ORIGINAL COMP DATE: 05/09/2001			ORIGINAL CONTRACT AMOUNT: \$0.00			
CONTINGENCY: \$528,292.00			CURRENT COMP DATE: 05/09/2001			CURRENT CONTRACT AMOUNT: \$0.00			
PAYMENT NO.	PERIOD COVERED	%	EARNINGS TO DATE	RETAINAGE TO DATE	DEDUCTIONS TO DATE	LIQ DAMAGES TO DATE	PAID TO DATE	EARNINGS THIS PERIOD	PAID THIS PERIOD
0001	06/01/1999 - 06/30/1999	0%	\$131,325.00	\$0.00	\$0.00	\$0.00	\$131,325.00	\$131,325.00	\$131,325.00
0002	07/01/1999 - 08/31/1999	0%	\$357,247.00	\$0.00	\$0.00	\$0.00	\$357,247.00	\$225,922.00	\$225,922.00
0003	09/01/1999 - 09/30/1999	0%	\$532,963.40	\$0.00	\$0.00	\$0.00	\$532,963.40	\$175,716.40	\$175,716.40
0004	10/01/1999 - 10/31/1999	0%	\$718,904.12	\$0.00	\$0.00	\$0.00	\$718,904.12	\$185,940.72	\$185,940.72
0005	11/01/1999 - 11/30/1999	0%	\$879,444.19	\$0.00	\$0.00	\$0.00	\$879,444.19	\$160,540.07	\$160,540.07
0006	12/01/1999 - 12/31/1999	0%	\$1,123,858.25	\$0.00	\$0.00	\$0.00	\$1,123,858.25	\$244,414.06	\$244,414.06
0007	01/01/2000 - 01/31/2000	0%	\$1,199,318.18	\$0.00	\$0.00	\$0.00	\$1,199,318.18	\$75,459.93	\$75,459.93
0008	02/01/2000 - 02/29/2000	0%	\$1,292,729.96	\$0.00	\$0.00	\$0.00	\$1,292,729.96	\$93,411.78	\$93,411.78
0009	03/01/2000 - 03/31/2000	0%	\$1,481,502.36	\$0.00	\$0.00	\$0.00	\$1,481,502.36	\$188,772.40	\$188,772.40
0010	04/01/2000 - 04/30/2000	0%	\$1,630,978.07	\$0.00	\$0.00	\$0.00	\$1,630,978.07	\$149,475.71	\$149,475.71

Creating an SDEF Pay Request in Primavera



Open the Activity Form Budget Summary Window



Comments regarding the COST TO DATE field

First make sure the resource shown in the Activity Form, Budget Summary Window is either "COST0001" or the value of the resource such as "LUMP SUM" that you have created. Next place the value for the activity's earned value, in the "Actual to Date (ACWP)" field. While the definition of the SDEF field is in an activities earned value the "Earned Value" field in Primavera was not used. The differences in nomenclature are due to the variety of influences which impact cost control for projects. The COST TO DATE field may be filled by either copying the number in the "Earned Value" field, generated through the use of the time-based percent complete or by entering the actual value earned. No value is required if the activity has: resource that uses unit costs. See the unit cost record for additional information.

Primavera Budget Summary Screen

The screenshot shows a software interface titled "Budget Summary". At the top left, there are buttons for navigating between resources: a minus sign (-), a plus sign (+), and a dropdown menu. The current resource selected is "COST0001". Below this is a table with four columns: "Resource", "Cost Acct/Category", "Driving", and "Curve". A single row for "COST0001" is listed, with the "Driving" column containing an unchecked checkbox.

Resource	Cost Acct/Category	Driving	Curve
COST0001		<input type="checkbox"/>	

Below the table is a large data grid with a header row containing columns for "Units", "Cost", "Total Units", and "Total Cost". The data grid lists various budget metrics for the resource:

	Units	Cost	Total Units	Total Cost
Units per day	0.00			
Res Lag/Duration	0			
% Complete/Expended	0.0	90.0	0.0	90.0
Budgeted amount	0.00	23500.00	0.00	23500.00
Planned value	0.00	0.00	0.00	0.00
Earned value	0.00	0.00	0.00	0.00
Actual to date	0.00	21150.00	0.00	21150.00
To complete	0.00	2350.00	0.00	2350.00
At completion	0.00	23500.00	0.00	23500.00
Variance	0.00	0.00	0.00	0.00

Chapter 7 – Exchanging Data



Overview

The QCS program allows the contractor to exchange data electronically with the government. There are two general periods: Initial Planning/Scheduling and Contract Progress. An overview of each follows.

QC Planning and Contract Scheduling:

1. **Government:** Design work must be complete and all data entered into RMS while the project is still in the Future stage, before work with the QCS module begins. Otherwise, data may be overwritten. When the design work is complete and the contract is awarded, export the data to the contractor. A complete copy of the contract must be included on the first export. This data can then be used as the starting point for the contractor's own planning. The Award Appropriation and Award Contract Line Items (CLINs) must be entered and exported before the contractor can complete pay activity entry.
2. **Contractor:** When entering pay activities, be sure the CLIN item numbers are exactly the same as those used by the Government. Pay particular attention to leading zeros, number of digits and justification. Data can be exported in SDEF (see note below) from other planning software and either imported into the QCS program or manually entered.
3. **Government:** Import the contractor's data. Changes made by the contractor are placed in a temporary holding area and do not overwrite any existing data in RMS until approved by the Government. Additions do not require Government approval with the exception of pay activities that must be approved or disapproved by the Government. All Changes can be approved in one step or optionally each change can be approved/disapproved separately.
4. Export the data to the contractor. The approvals and disapprovals as well as changes made by the Government will be included in the export.
5. Repeat steps 2 and 3 until the contractor planning work is complete. Once the planning and scheduling are complete and the actual work has begun, the data entry switches to the ongoing work of the construction.

Contract Progress: Daily QC Reports, Payments & Transmittal Log

1. **Contractor:** Import QA daily update data regularly from the government. Enter any data for the daily report, payments or transmittals. Check for items returned by the government, e.g. QC requirements that have been reissued. Export the data to the government; include in the export only those items that have been changed. A printed, signed Daily QC Report must also be included and is the official legal document.
2. **Government:** Import and review the QC report, pay requests, and transmittals from the contractor. This data does not require approval and is copied directly into the project files. Enter the government's daily report, mods and payments processed, submittals approved, etc.
3. Export the data to the contractor. Include Libraries only if changes have been made to them.
4. Repeat steps 1 and 2 on a regular basis for the life of the project. Data exchanges are done according to the needs of the contract, but the more frequent the exchanges, the better. Some projects have daily or even twice daily exchanges.

General Guidelines

- A. If the government makes changes to the contractor's data, they will overwrite the contractor's data unless the contractor has also made changes to the same data.
- B. If the contractor is using planning software other than, or in addition to, the QC module, any government changes must be manually entered into that system so that it stays current.

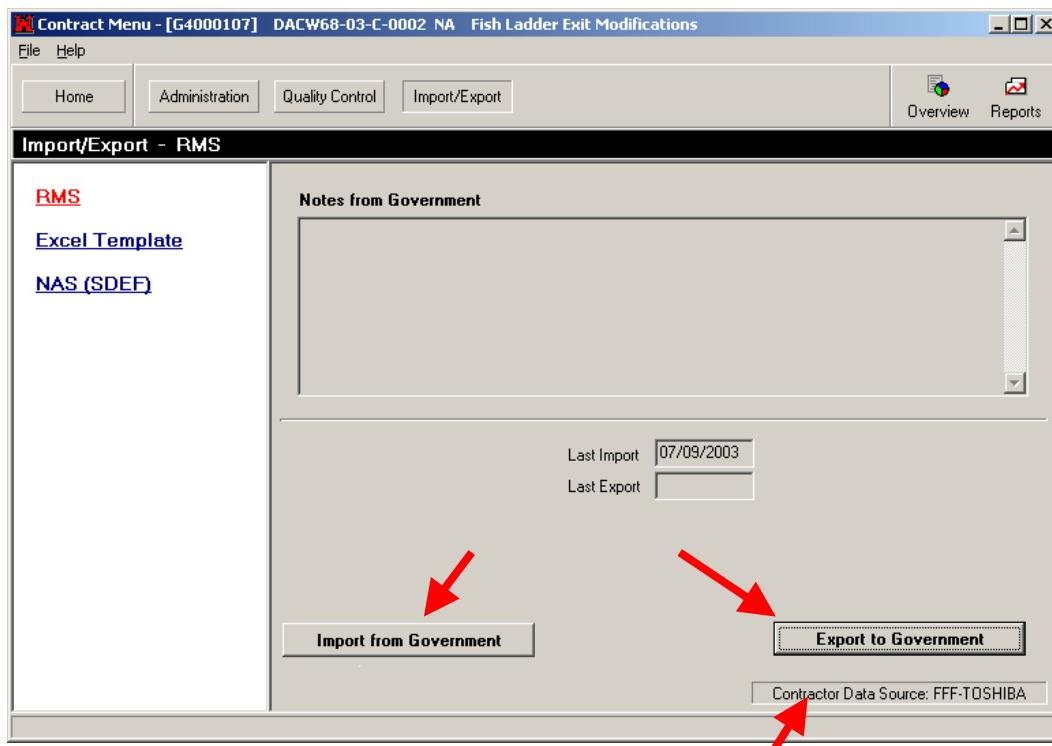
Steps to Importing or Exporting

These are the basic steps for importing and exporting data in QCS. Import and export screens are shown along with a list of the possible import/export choices.

1. You must be at the **Contract Menu** in order to have access to the **Import/Export** button.
2. From the **Contract Menu**, push the **Import/Export** button.
3. Choose to either import/export from the Government RMS program or the Contractor scheduling program.
4. Upon selecting **RMS**, you can either import or export data from/to the Government.
5. Upon selecting **NAS (SDEF)**, the only choice is to import from the scheduling system.

RMS Import/Export Screen

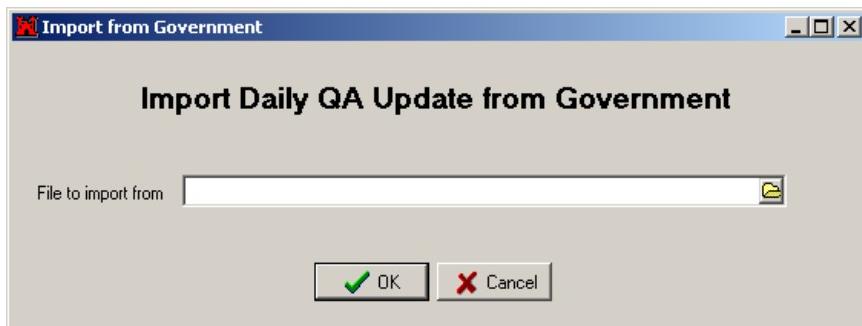
From RMS, you can import from or export to the government.



NOTE: The bottom of the window advises you where the data source is originating. If you use the program in more than one location, you should ensure that the exchange of data is consistently done from the same (Master) location.

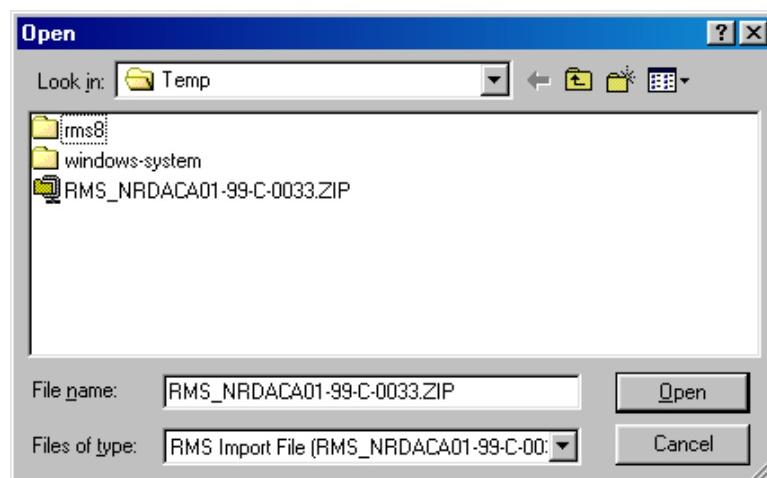
Push the **Import from Government** button to begin. You are then presented with a window to identify the file you wish to import. The Government QA Representative assigned to your contract should provide this file.

Use the lookup (ellipses) to locate the file with the Windows Explorer.

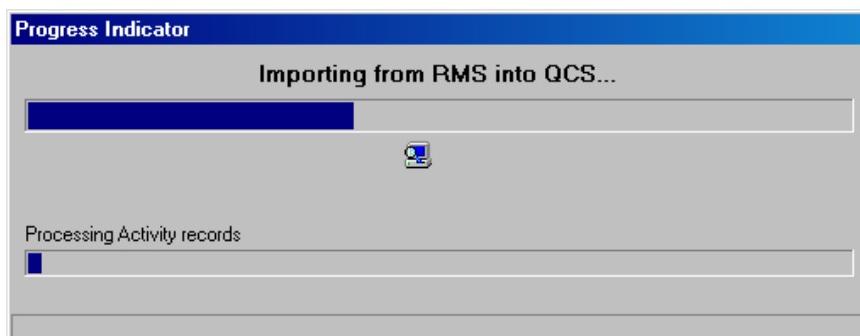


The RMS program is designed to name the export file with a prefix of "RMS_", followed by the contract number.

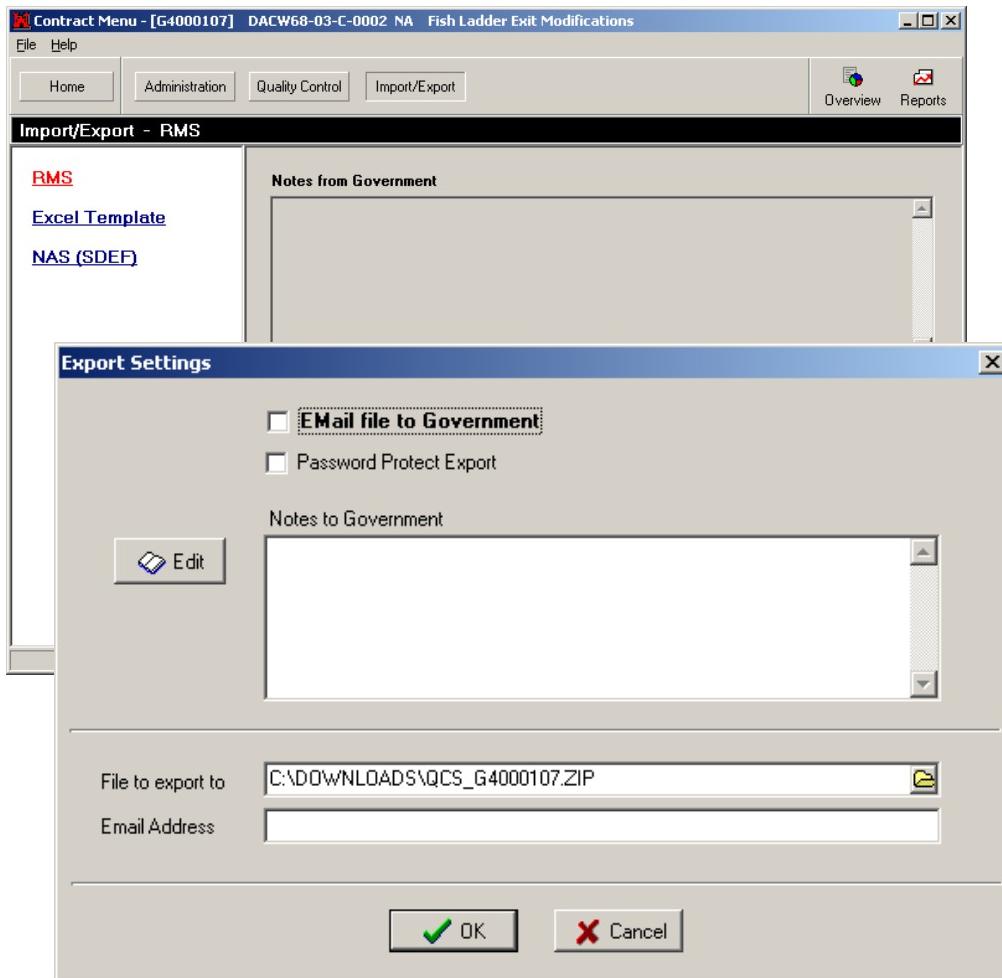
The import will proceed automatically. The progress bar, as seen below, will disappear when the export is completed.



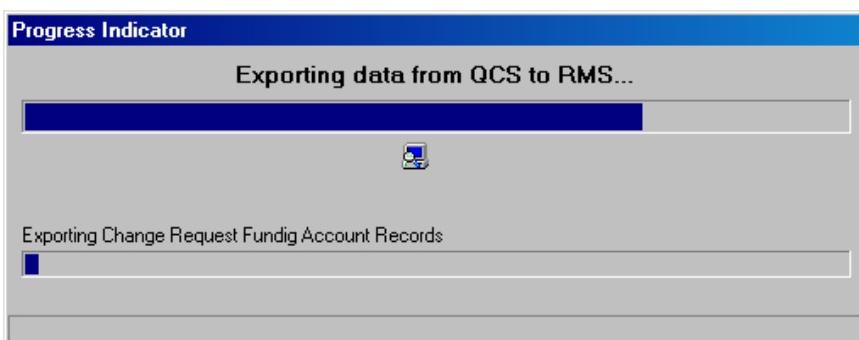
Next, push the **Export to Government** button to view the screens that will appear.



The QCS program is designed to name the export ZIP file with a prefix of "QCS_", followed by the contract number.



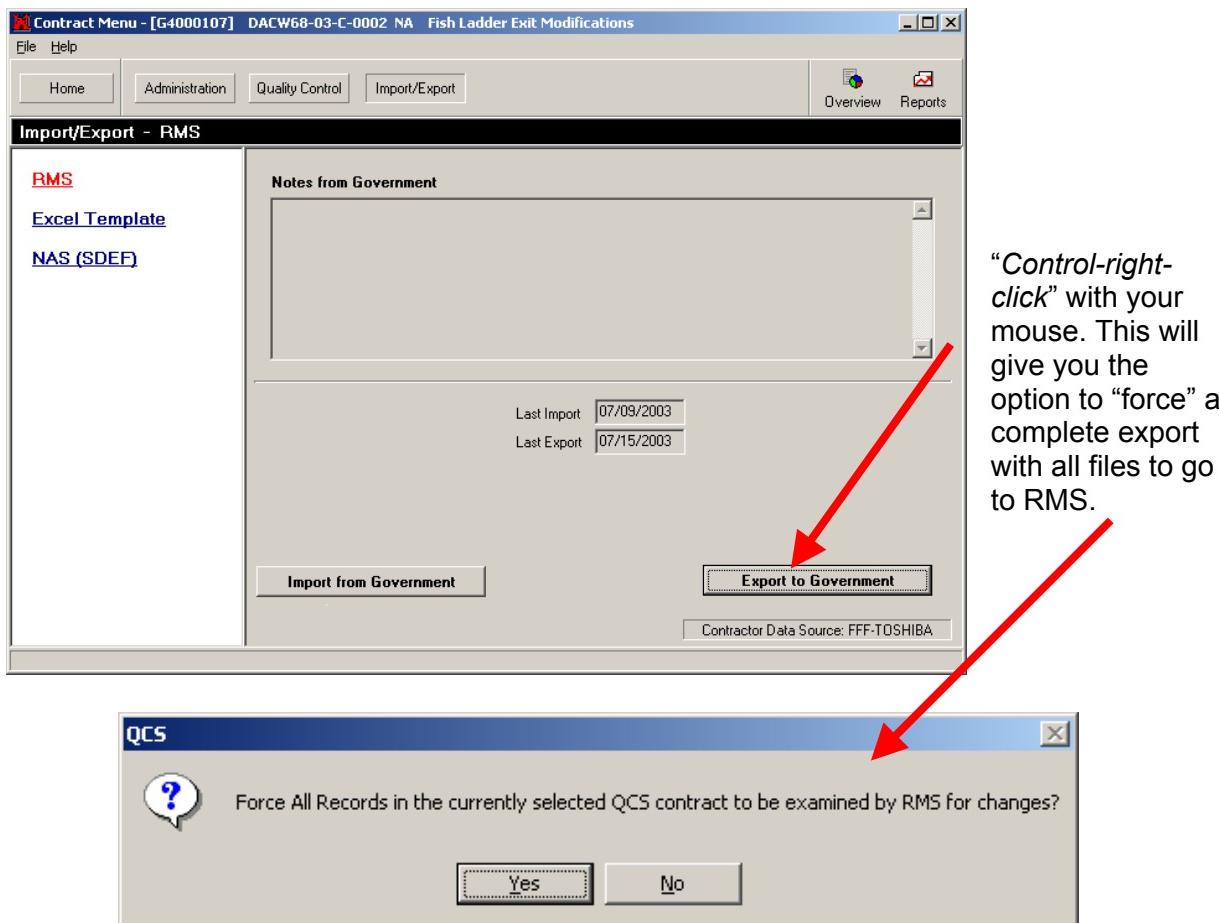
The progress indicator, similar to the one above, will disappear when the export is complete. You will then provide the file (disk or email) to the Government to allow their import into the RMS program. You are also able to "Password" protect the Export if desired.



Export Data Sent to Government

The QCS export feature does not send ALL data every time you do an export. Only records that have been changed since the last version of a QCS export that the Government has fully

processed get sent. However, you can “force” all records to get sent and examined by the Government RMS program by “control right clicking” on the **Export to Government** button on the export screen before starting the export. The default (not all records being sent) greatly reduces the size of the QCS export files. This may be very significant when exchanging data via the email process.



Automated QC Data Exchange

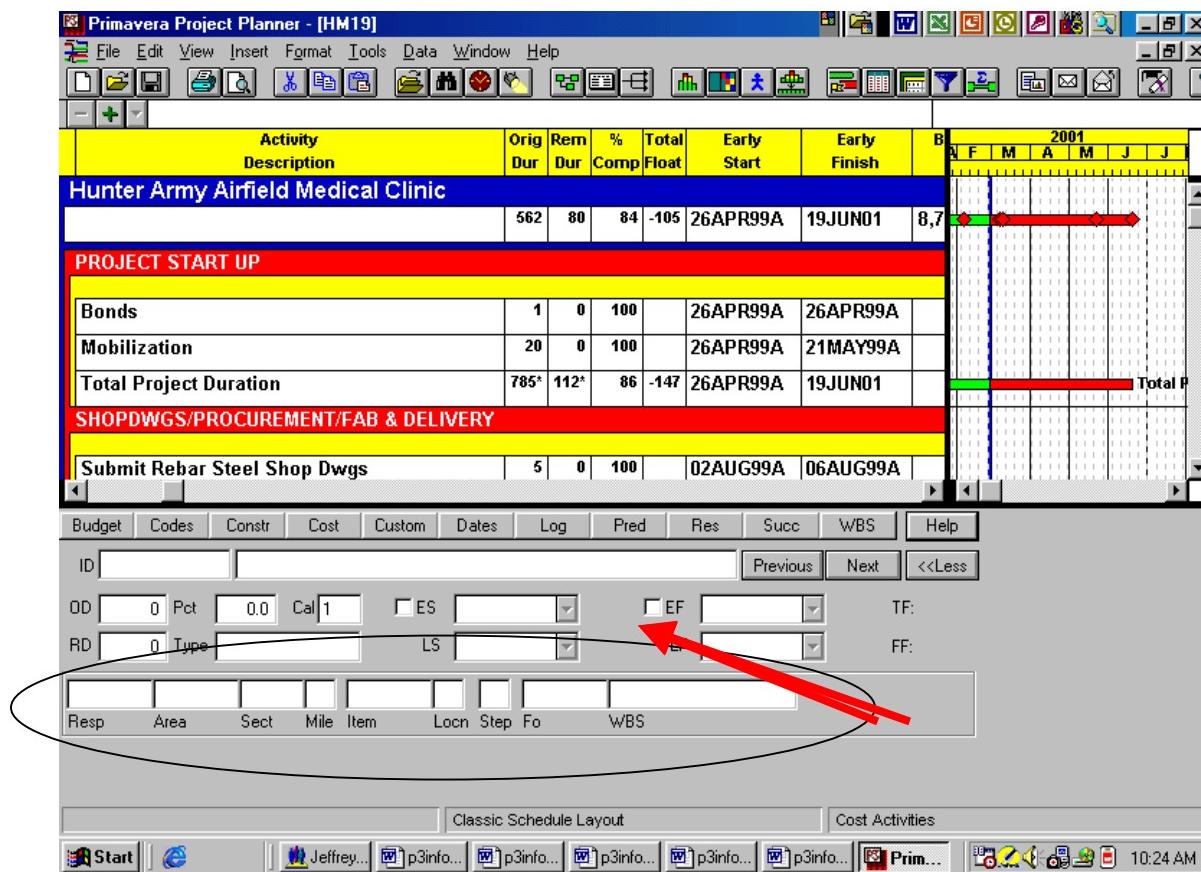
The process of exchanging data between the government and the contractor has been designed to be as automatic as possible, requiring almost no intervention. While using the QCS program, all importing is handled automatically by the system. The contractor is required to approve or disapprove activities and data imported from the scheduling program.

A walk through Primavera Screens



NOTE: Primavera is currently the only commercial vendor that is supporting the SDEF in their Windows product. The current version is P3, as reflected on the following screens. There have been numerous attempts, and unsuccessful as far as we know, to write script files for such alternate programs like SureTrak, MS Project, and others.

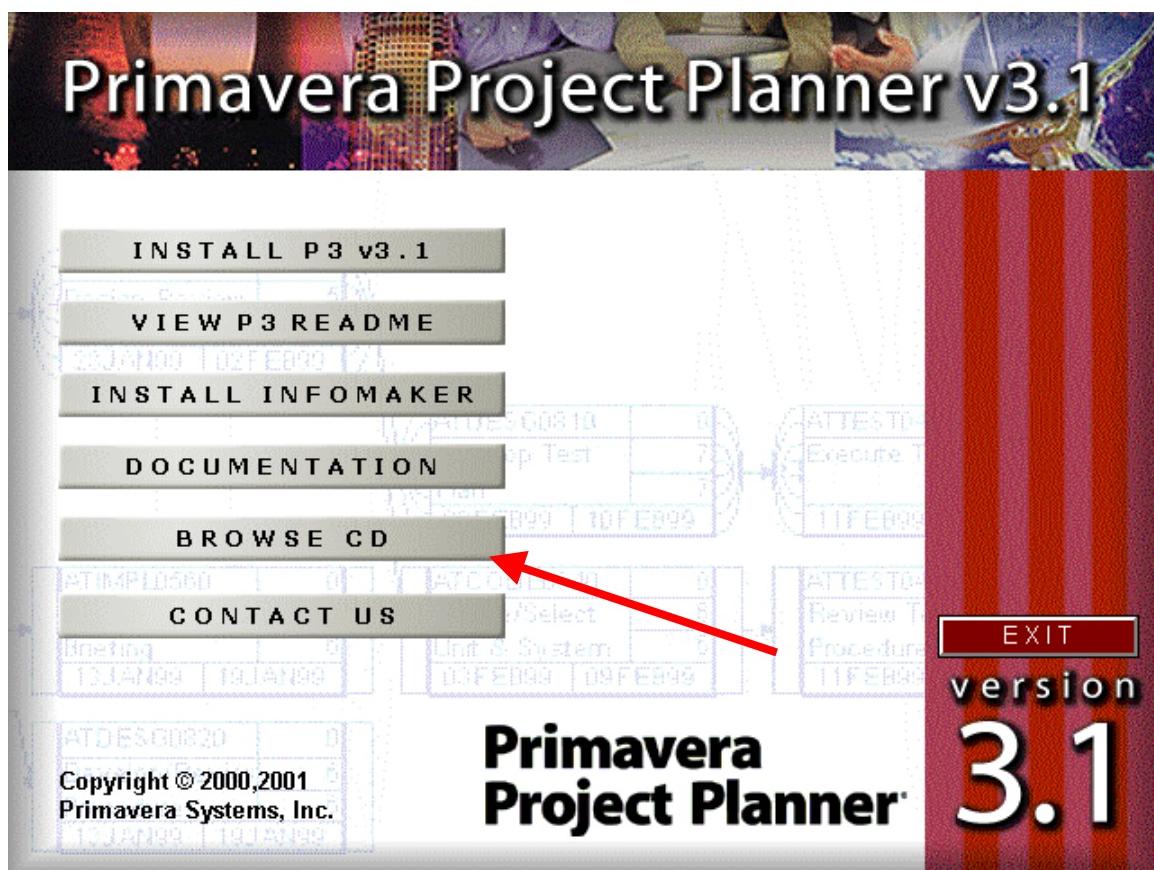
Typical Activity Code Structure



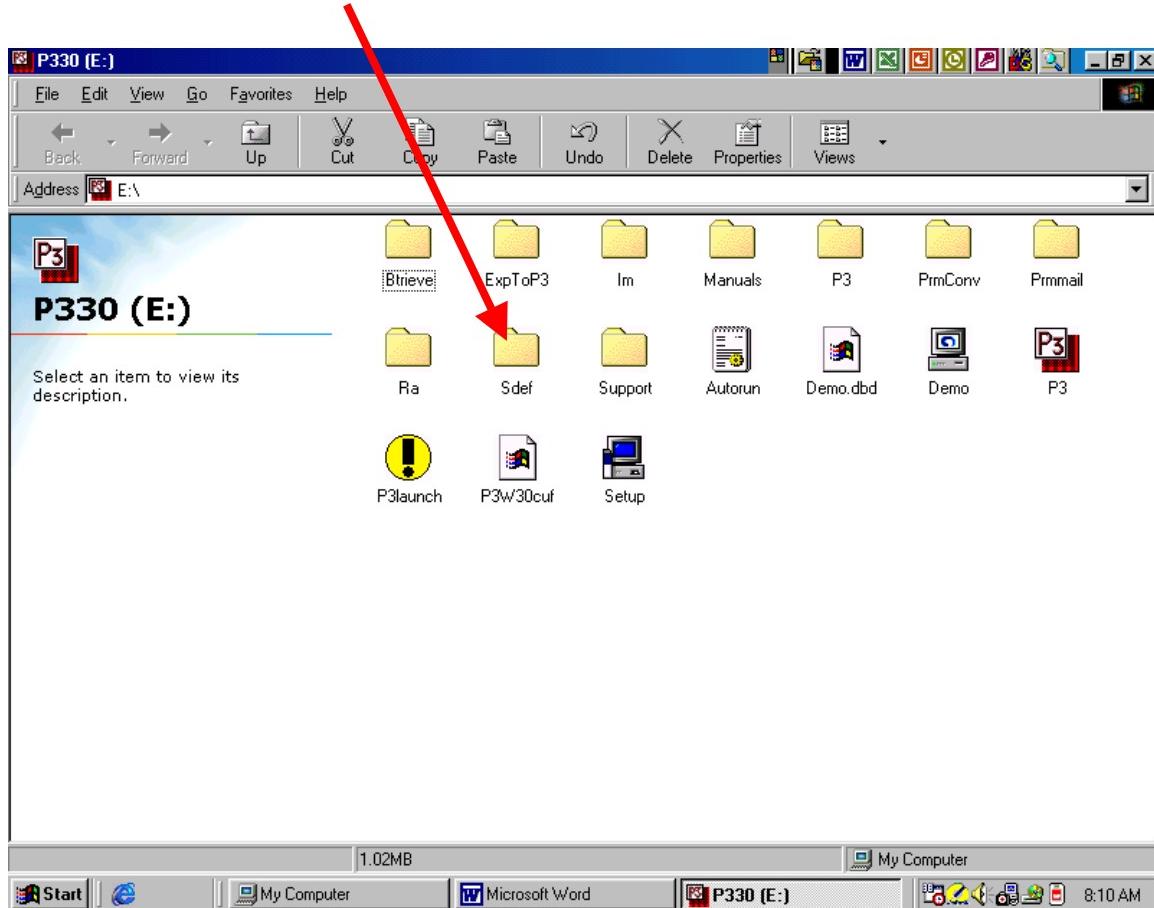
This is a typical activity code structure. This does not conform to SDEF and cannot be imported into QMS. The activity code structure must be changed.

Installing the SDEF Utility:

Insert the P3 CD and go to **BROWSE CD**.

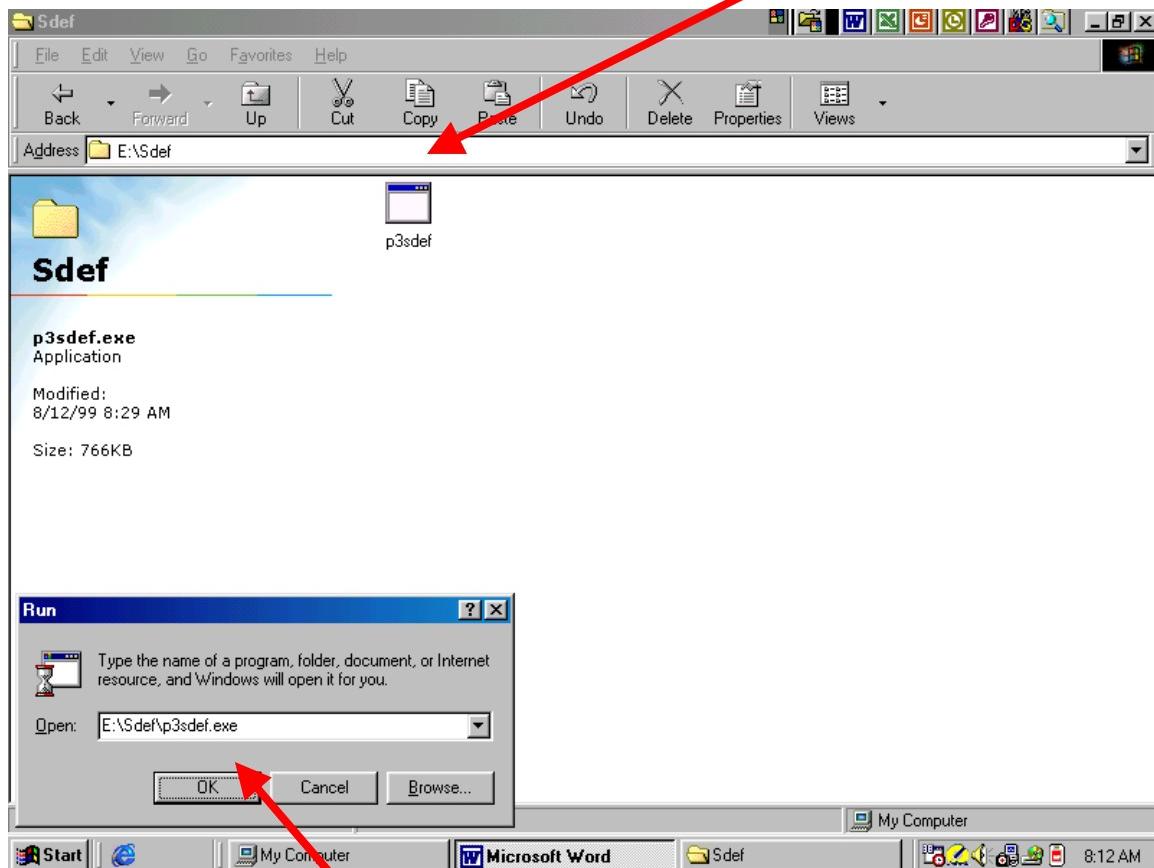


Copy the “SDEF” folder to your computer C-drive



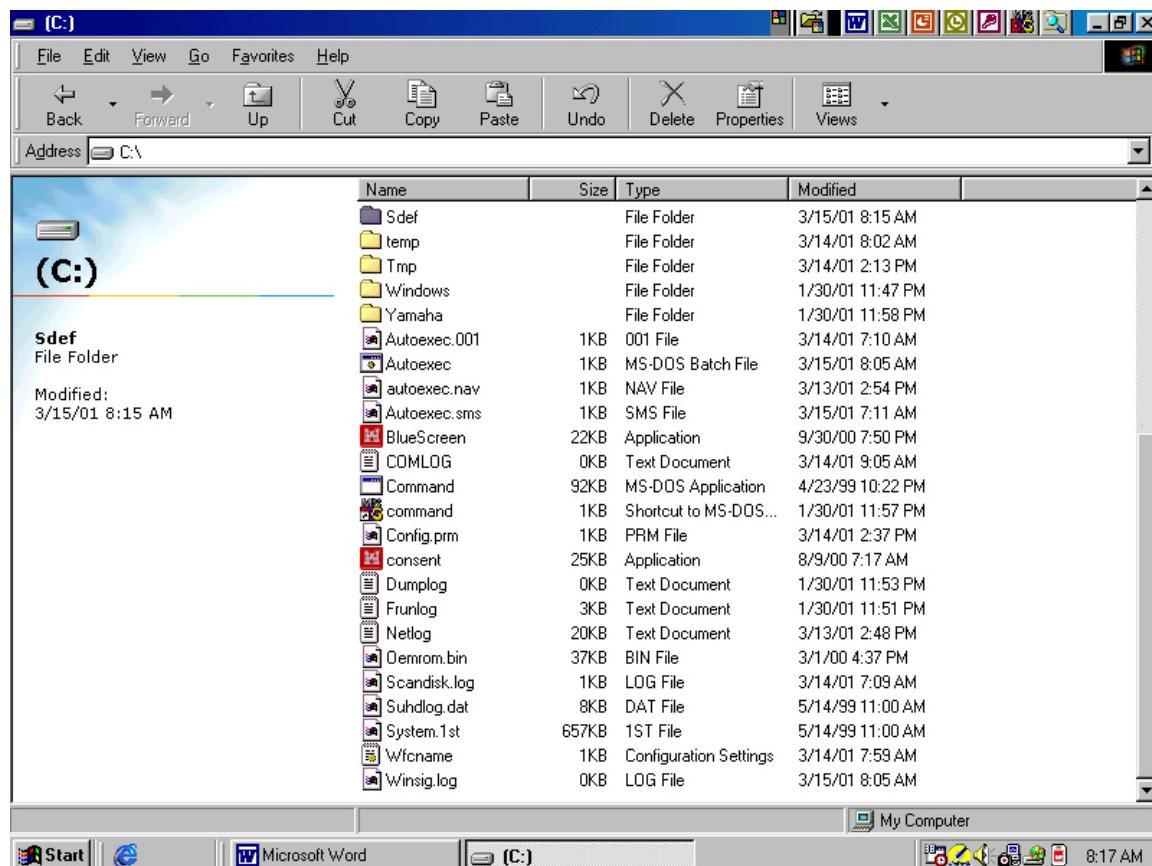
Extract “p3sdef” to your C-drive

The “SDEF” folder on your c-drive should have “p3sdef” in it.



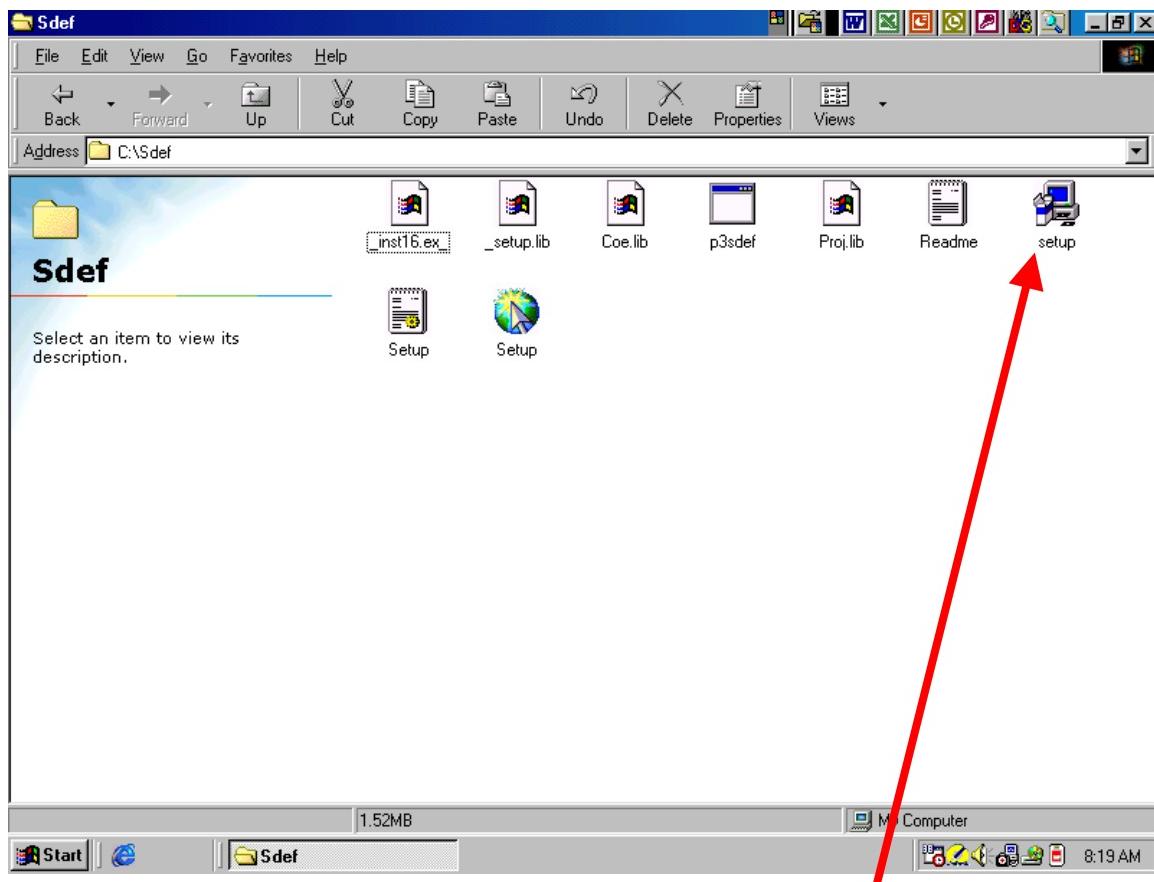
From your computer Desktop, select the **START** and then **RUN** to run p3sdef. It will extract to your C-drive.

EXPLORE the SDEF folder



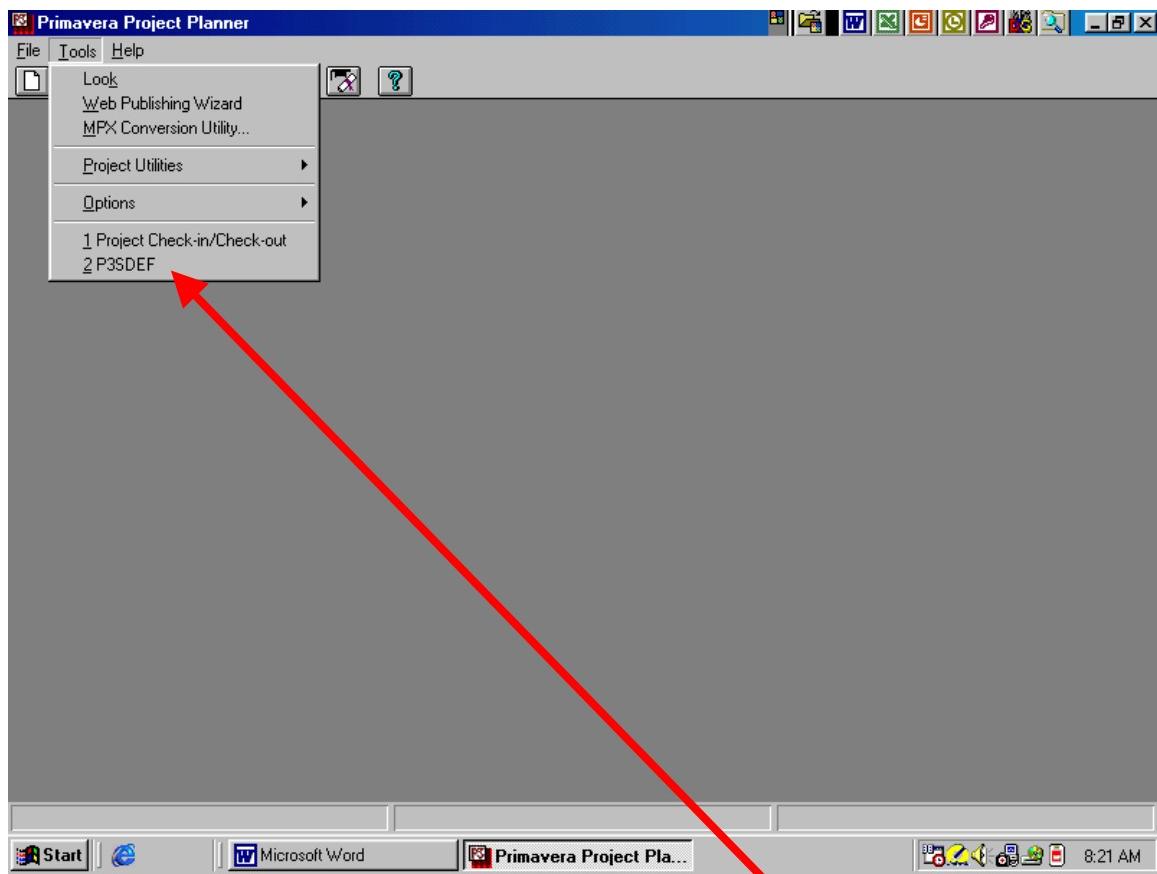
From your Desktop, use your mouse and right-click on the Computer icon to Explore (browse) your C-drive and open the **SDEF** folder by double-clicking on it.

Run the SDEF “Setup.exe” File



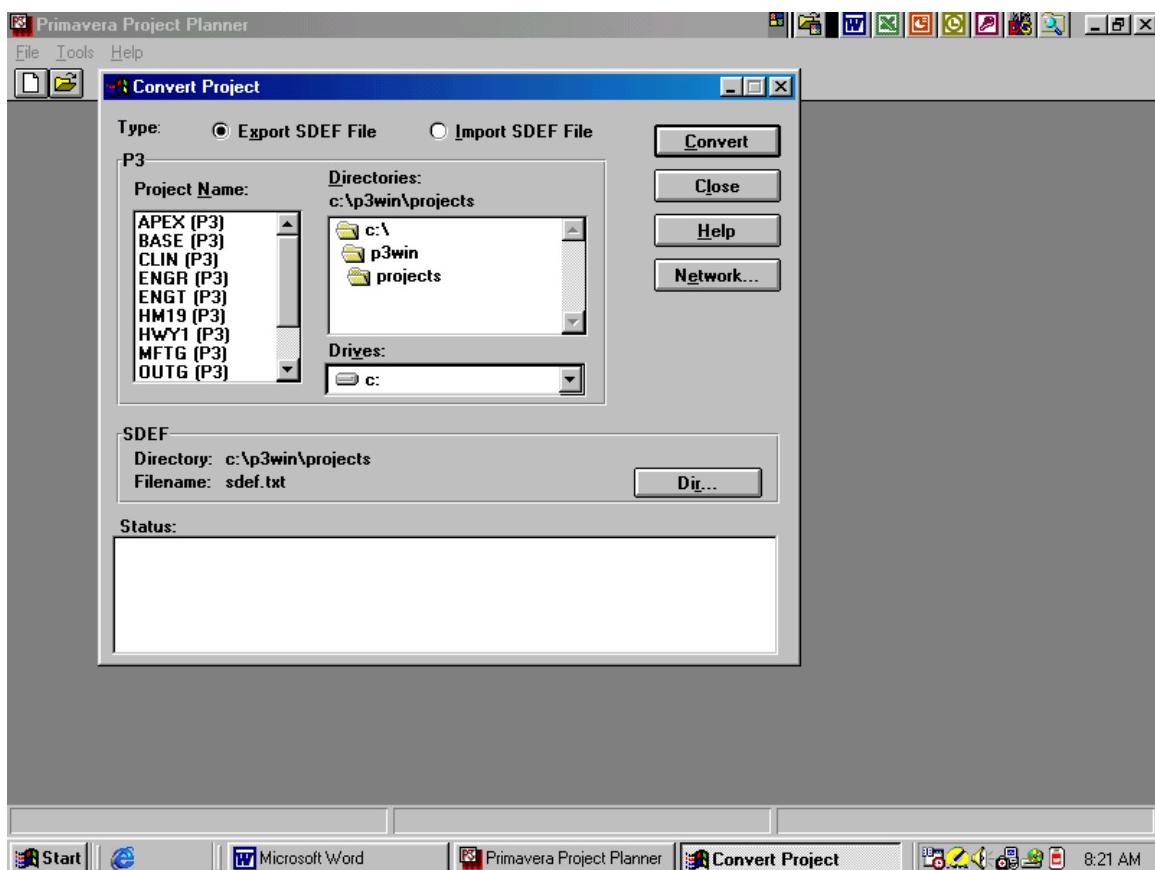
The **SDEF** folder should now have these files in it. Run this “setup.exe” file.

Open Primavera



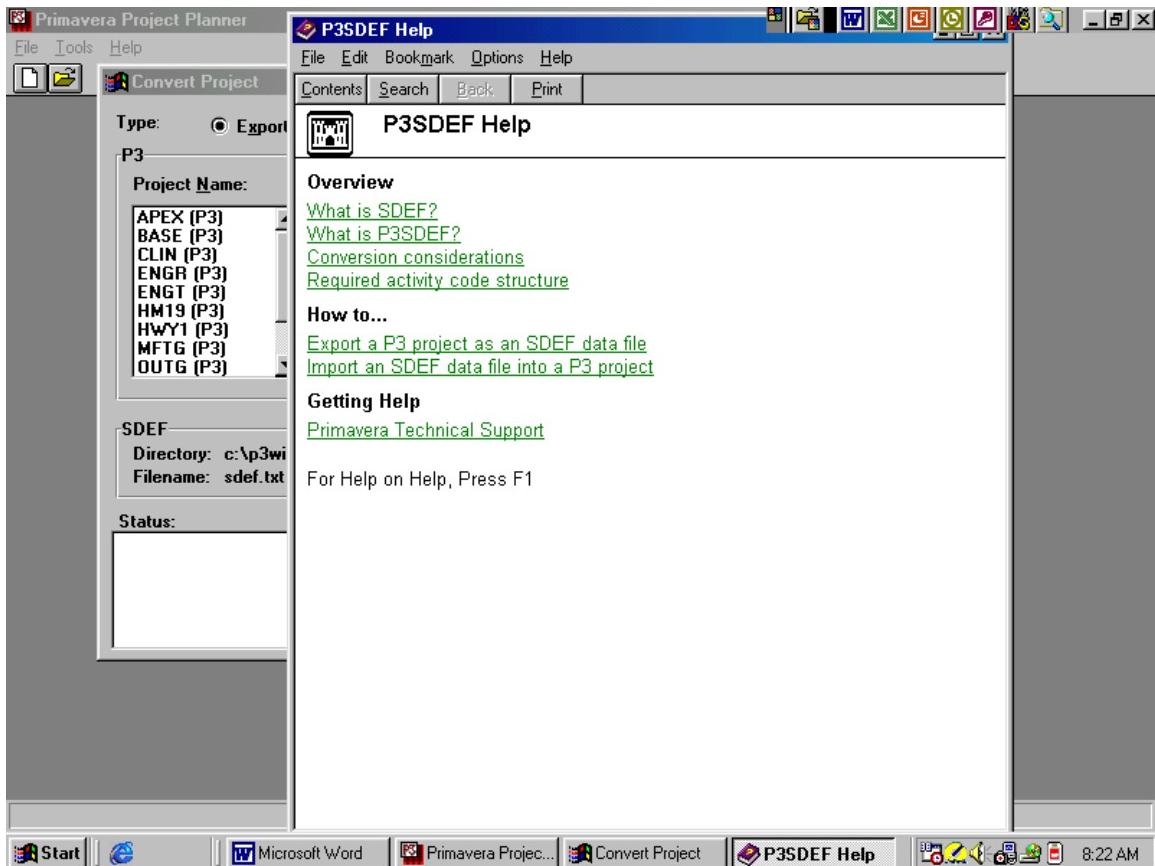
Start Primavera. Your **TOOLS** dropdown menu should now have **P3SDEF** indicate on it.
Mouse-click on **P3SDEF**.

Primavera “Convert Project” Screen



SDEF Convert Project screen

P3SDEF Help Screen



Choose the help button to get additional information.

Primavera Activity Code Structure

P3SDEF Help

File Edit Bookmark Options Help

Contents Search Back Print

Required activity code structure

The US Army Corps of Engineers (COE) requires the consistent use of a predefined activity code structure in all projects. This structure specifies the sequence, name, and length of each activity code in the project. The [SDEF](#) format adheres to this structure. All P3 projects being exported to SDEF format should use this exact activity code structure.

Note The required codes use 56 of the 64 characters available for activity coding in P3. You can define and use the remaining 8 characters for additional code fields at the end of the list.

Field #	Code	Length	Field Description
1	WRKP	3	Workers per day
2	RESP	4	Responsibility
3	AREA	4	Area
4	MODF	6	MOD or Claim #
5	BIDI	6	Bid Item
6	PHAS	2	Phase
7	CATW	1	Category of work
8	FOW1	10	Feature of work (segment 1)
9	FOW2	10	Feature of work (segment 2)
10	FOW3	10	Feature of work (segment 3)

Note The SDEF code Feature of Work is 30 characters long. Because the maximum length of a P3 code field is 10 characters, Feature of Work is divided into 3 segments.

How to...

[Modify the activity code sequence](#)

Start Microsoft Word Primavera Project... Convert Project P3SDEF Help 8:23 AM

QCS and RMS require a specific activity code structure.

Reorder Primavera Activity Code Fields

The screenshot shows a Windows application window titled "P3SDEF Help". The menu bar includes "File", "Edit", "Bookmark", "Options", and "Help". Below the menu is a toolbar with various icons. A navigation bar at the top has buttons for "Contents", "Search", "Back", and "Print". The main content area is titled "Modifying the activity code sequence". It contains instructions for reordering activity code fields, including steps for copying the project, exporting data items, modifying column titles, importing the spreadsheet, and restructuring the dictionary. The status bar at the bottom shows icons for Start, Microsoft Word, Primavera Project, Convert Project, and P3SDEF Help, along with the time "8:24 AM".

Modifying the activity code sequence

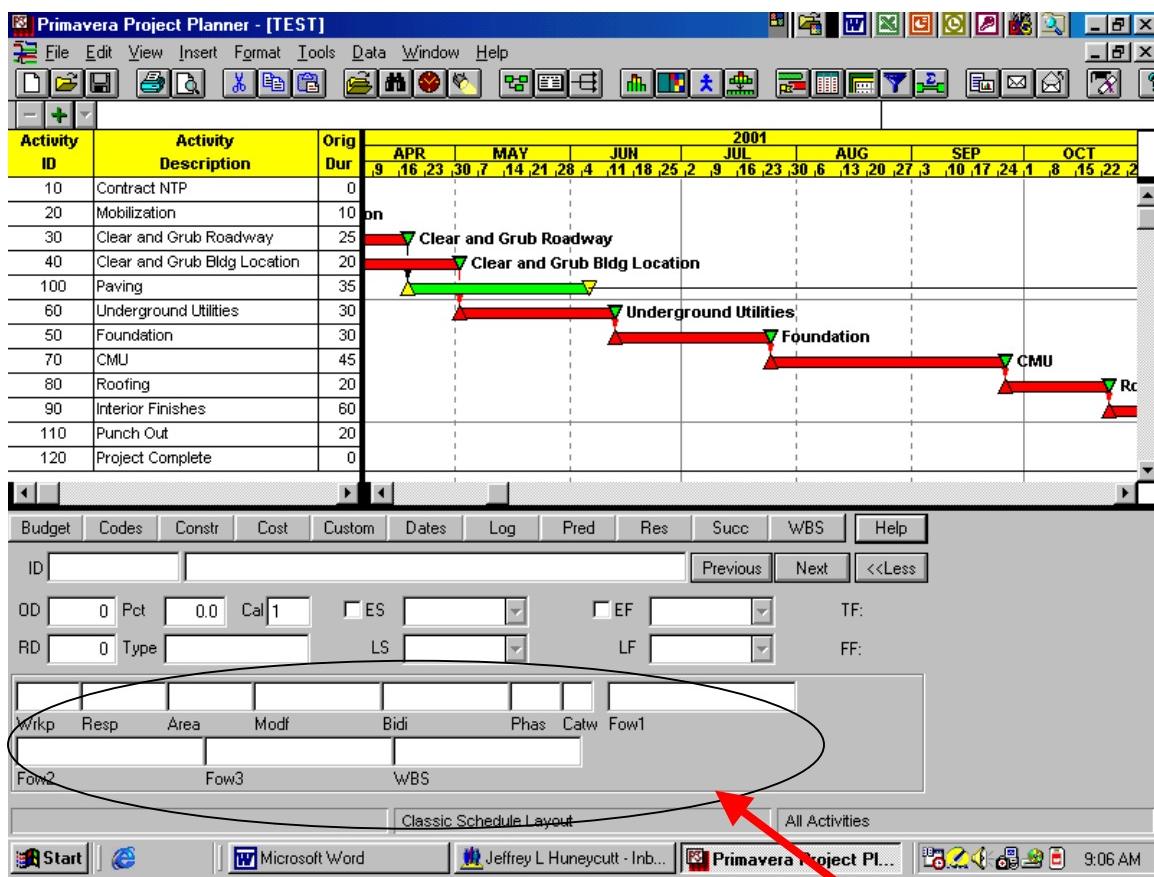
Your project's Activity Code Dictionary must list the 10 required code fields in the sequence specified in the [Required activity code structure](#) topic. To modify the sequence of codes in your project to comply, follow these steps.

To reorder existing activity code fields

- 1 Make a copy of the project (choose Tools, Project Utilities, Copy).
- 2 In the original project, choose Tools, Project Utilities, Export.
Export the data items Activity ID and Activity Codes to a spreadsheet using Lotus format.
- 3 If your project requires code field name changes as well as field reordering, continue with step 3; otherwise, skip to step 4.
Open the spreadsheet using Lotus, Excel, or other software capable of saving the file in Lotus format.
Modify the column titles, and the range names associated with the columns, to match the required activity code field names.
Save the changes.
- 4 Open the copied project that you created in step 1.
Restructure the Activity Codes Dictionary so that the code field sequence complies with the SDEF format.
- 5 Choose Tools, Project Utilities, Import.
Importing the spreadsheet updates the dictionary and the code assignments for activities in the project.

This is how you reorder activities of an existing project.

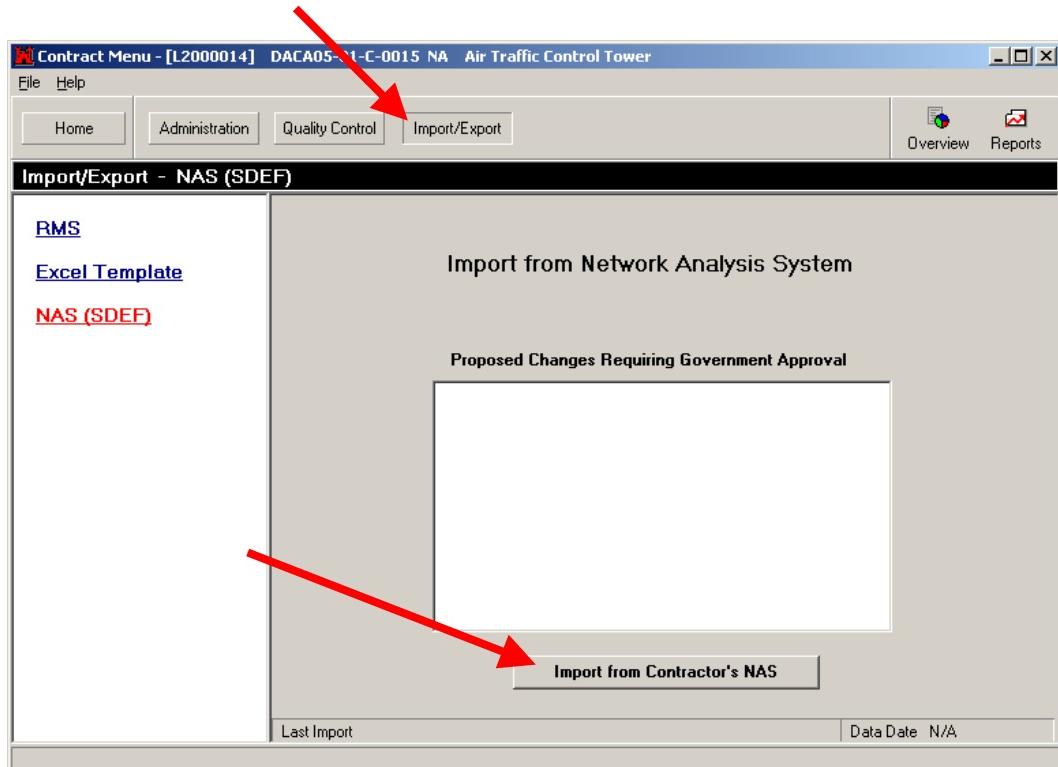
New SDEF Activity Structure



This should be the new structure you see on your project to conform to the SDEF format.

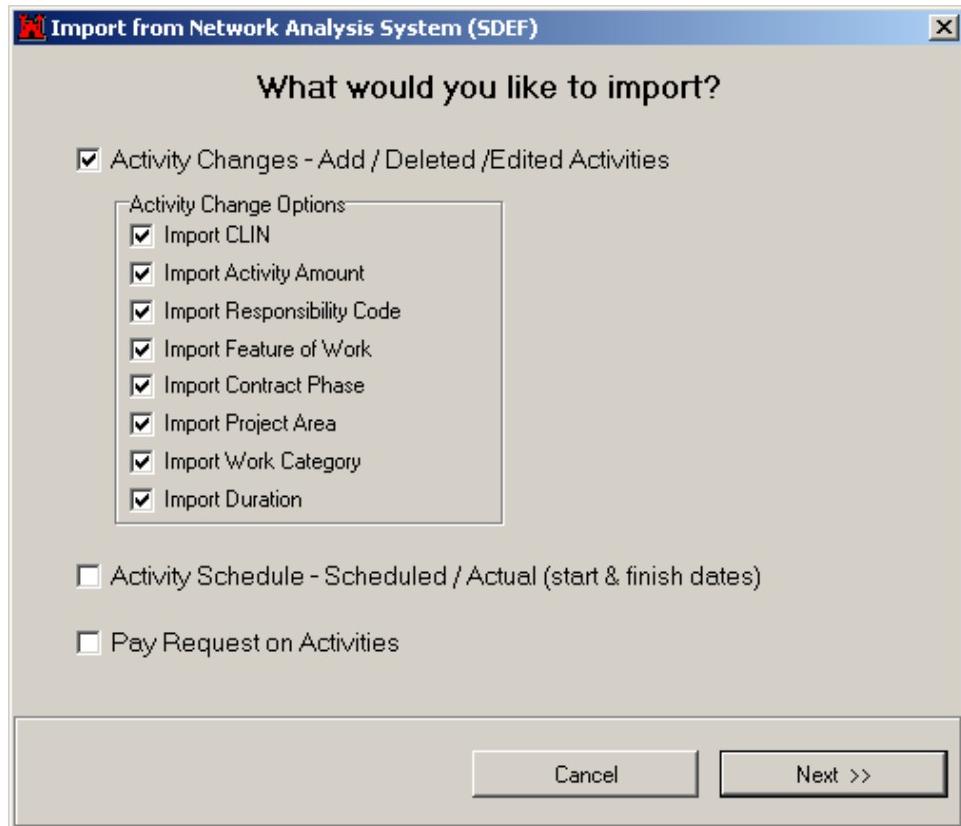
Importing the SDEF file into the QCS program

From the top menu bar, select **Import/Export** and push the **Import from Contractor's NAS** button.



Indicate what you would like to import

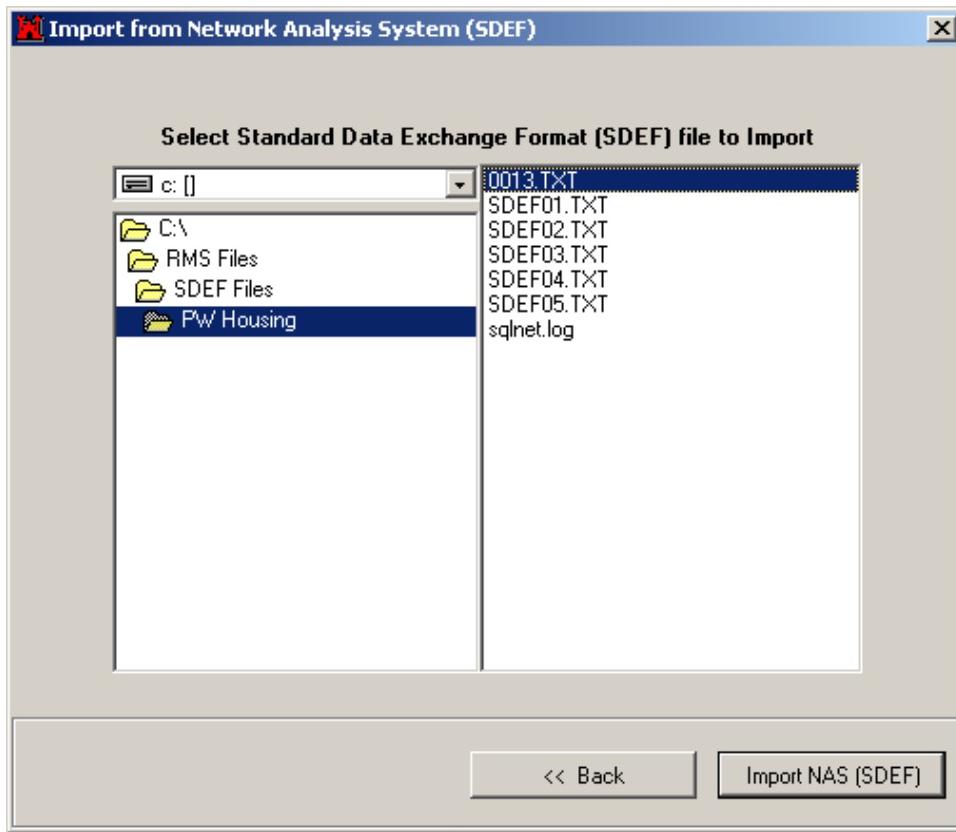
Numerous import options are available. Click (or un-click) the desire options.



Locate the SDEF file

Locate and highlight the SDEF file generated in your scheduling program (I.e., P3) using the Windows © explorer.

When you are importing the SDEF for the very first time, check the box “**Activity Changes**” and push OK at the bottom of the screen. On subsequent imports you would check the “**Activity Schedule**” which would update the activity schedule already existing.

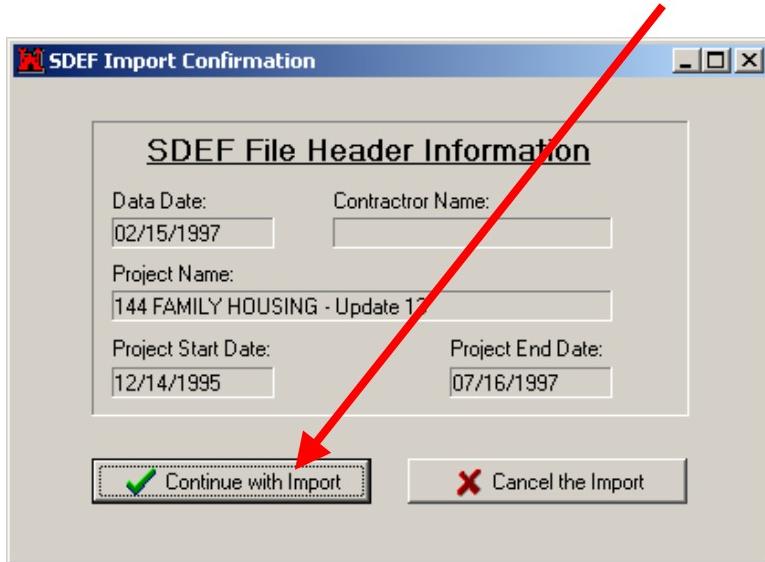


The program will load the selected SDEF file and provide a window wherein you confirm you have selected the desired contract to import.

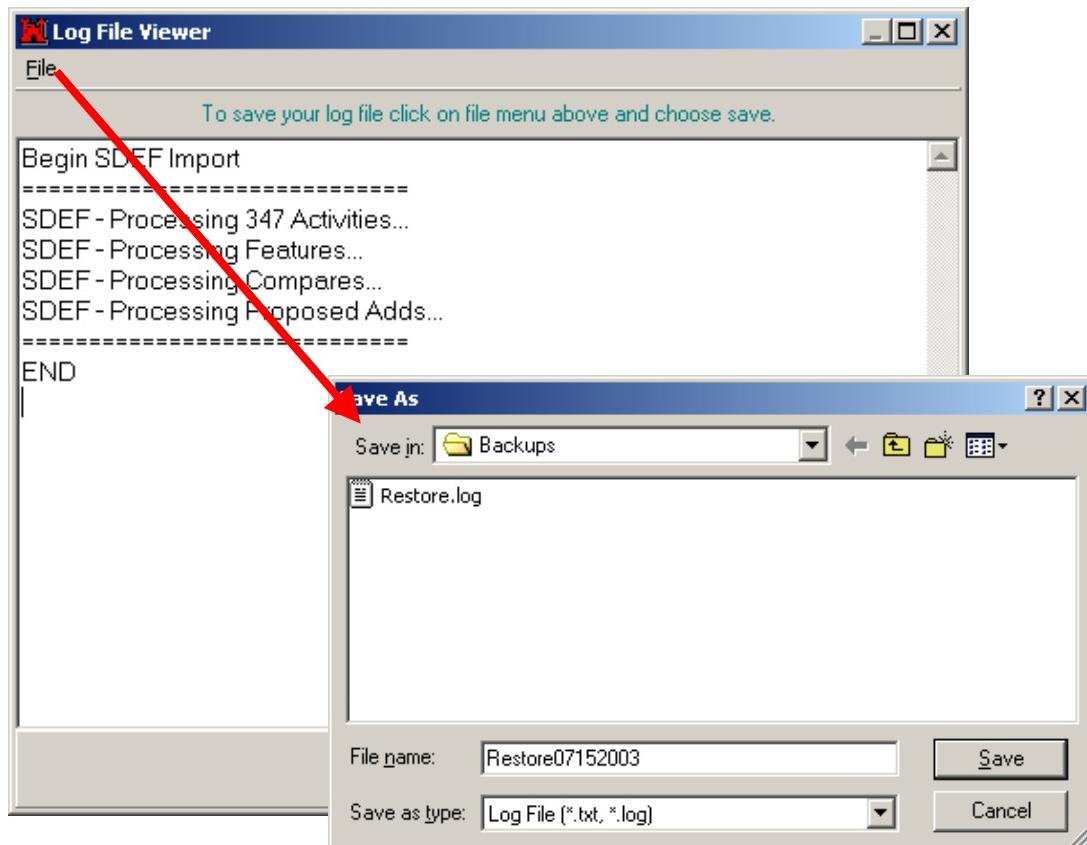


Confirm proper contract has been selected

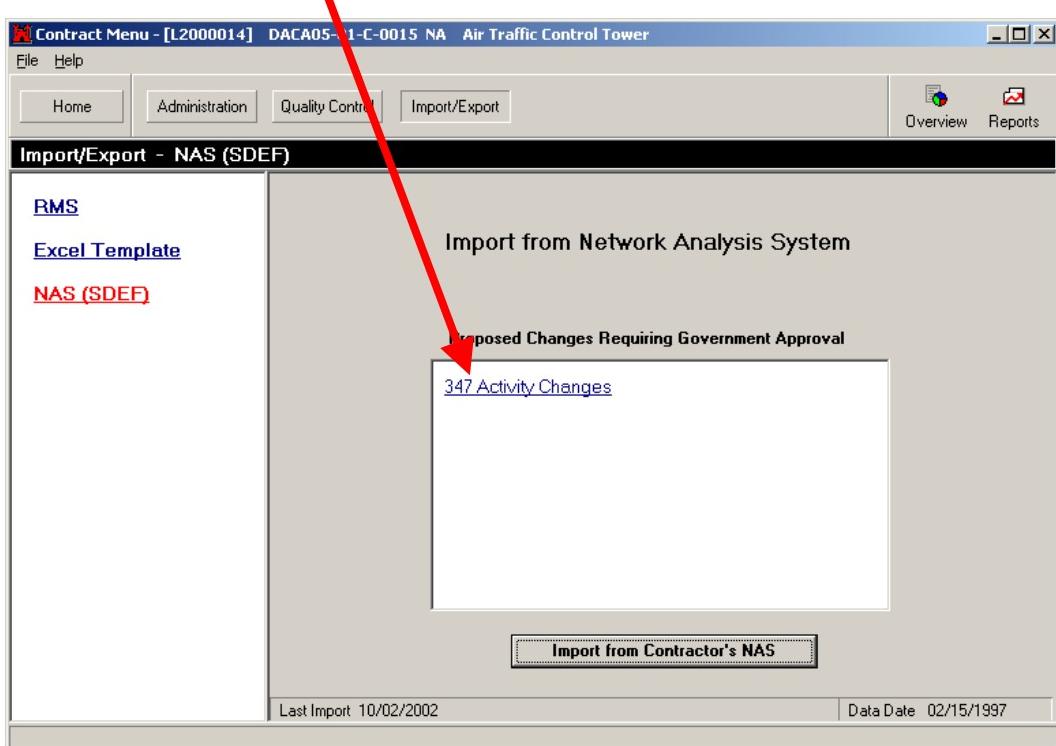
Confirm the proper contract is indicated and push the “Continue with Import” button.



The program will create a log to reflect the steps taken with the import. You may discard the log or save it for future reference.

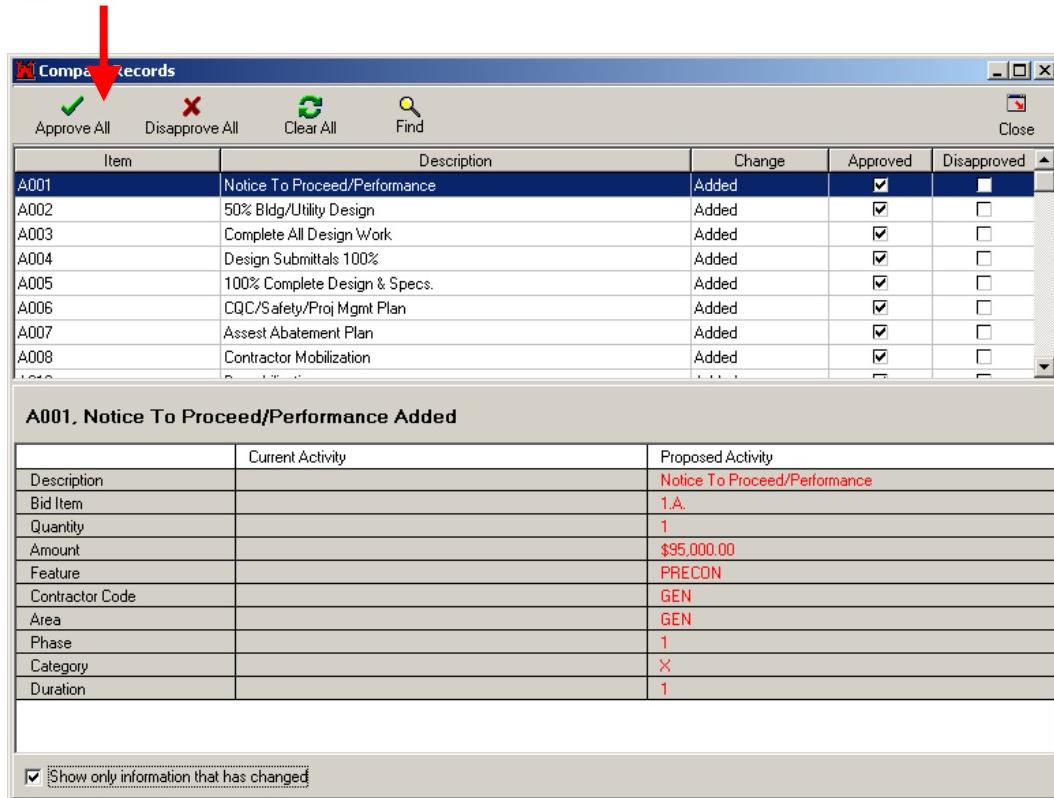


The program will automatically complete the import and indicate the number of Activity Changes that were imported. Click on this link.



Approve (or Disapprove) the imported Activities

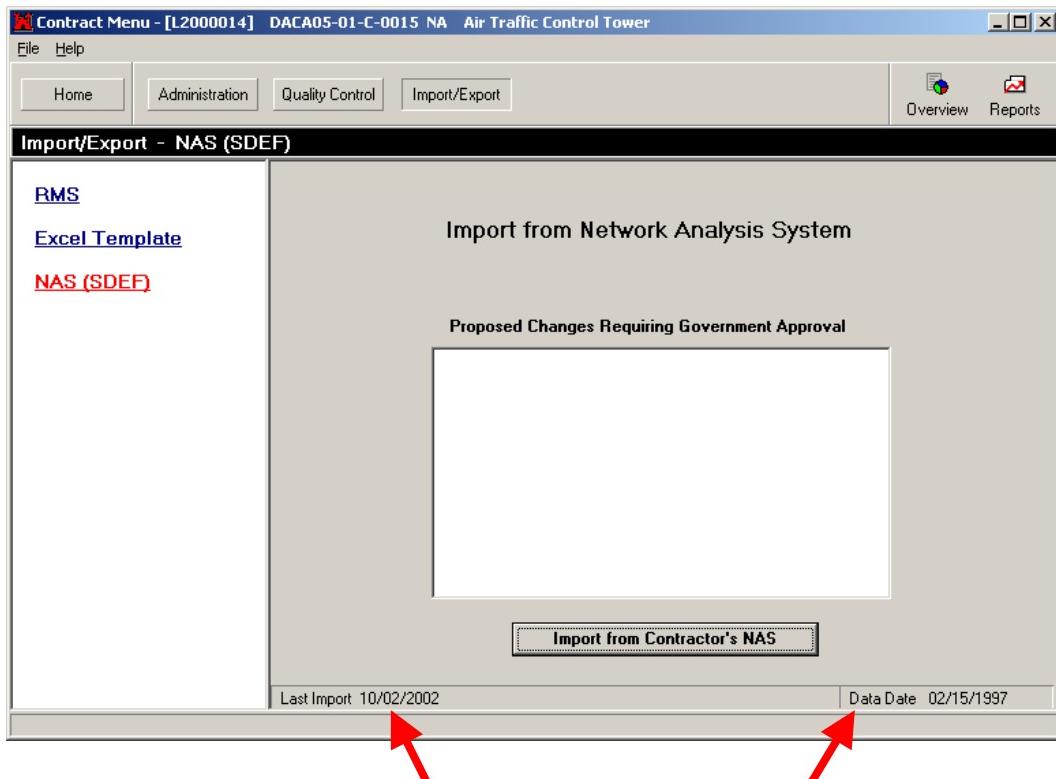
You must then approve (or disapprove) the activities imported. You can take the approval (or disapproval) action on an individual activity or all activities as provided across the top of the screen.



This step is put in the program as an additional safety feature to help avoid “clobbering” your data with the wrong activity schedule.

Close the screen when you have completed the action and the program will process the activity changes (import).

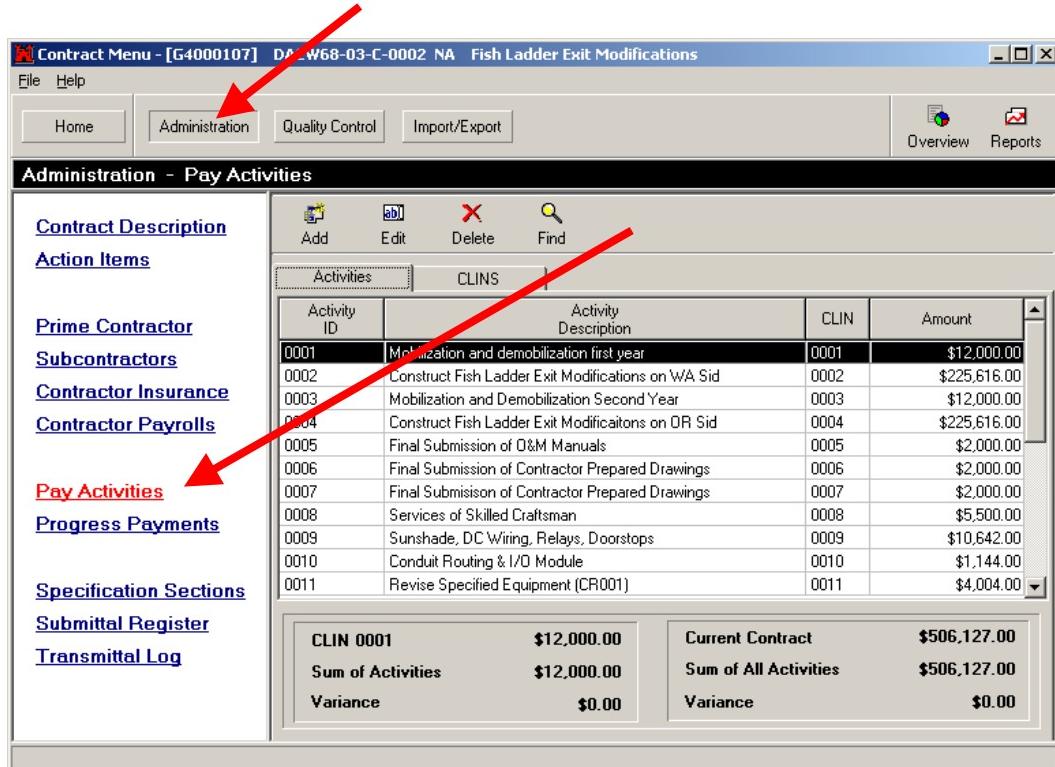


Quality Control System

The bottom of the window will indicate the **Last Import** date and the **Data Date** of the last import.

Verify that activities have been imported and are balanced

You may then go to **Administration** and **Pay Activities** to view your import.



You will not be able to export your activities to the Government's RMS program unless the sum of the activities is perfectly balanced, as will be indicated on the bottom of the window.

This completes the import process of the SDEF file.

Chapter 8 Planning, Schedule & Control Matrix

Overview



This chapter highlights and cross-references the unique relationships and requirements of Corps Guide Specifications used in typical construction contracts.

Planning, Scheduling & Control Matrix

Section 01312 - QCS	Section 01320 – Project Schedule	Section 01451 - CQC
1. Electronically share information: Administration, Finances, Quality Control, Submittal Monitoring, Scheduling	3.1 General Requirements – Scheduling shall be the responsibility of the contractor. Approved project schedule shall be used to measure the progress of work.	3.2.1 Content of CQC Plan – shall include organization chart, names and qualifications, appointment letters, procedures for scheduling and managing submittals, control and verification tests, tracking and controlling 3-phase inspections, and tests.
6.1.1 Contractor Information – Staffing submitted 14 days from receipt of QCS software.	3.1 – Contractor management personnel shall actively participate.	3.4.1 Personnel requirements – organization to be of sufficient number to ensure safety and contract compliance.
6.1.2 Subcontractor Information – Submitted 14 days from receipt of QCS software.	3.1 - Subcontractors and suppliers shall contribute in developing and maintain schedule.	3.6 Control – CQC is means by which the contractor ensures all construction, to include subcontractors and suppliers, complies with contract requirements.
6.1.3 Correspondence shall be identified with a serial number.		
6.1.4 Equipment – Maintain a current list of equipment		3.6.1 f – physical examination of equipment.

planned for use with inspection dates.		
6.2.1 Pay Activity Data – sum of pay activities must equal the contract amount and be grouped by CLIN. Sum of all CLIN's equals contract amount.	3.3.2.7 Bid Item – All activities shall be identified by the Bid Item (CLIN) to which the activity belongs. 3.3.2.4 Responsibility – All activities shall be identified by the part responsible to perform the work. Responsibility will be identified with a responsibility code.	
6.2.2 Payment requests – all payment requests shall be prepared using QCS. Payment requests shall be submitted monthly after the coordination meeting.	3.2 – Basis For Payment. 3.3.2.1 Activity Durations are those that allow progress of activities to be accurately determined monthly (30-days).	
6.3 Quality Control –CQC Plan to be submitted in QCS within 7 Calendar Days of Acceptance.	3.4.1 Preliminary Project Schedule submitted within 20 days of NTP. 3.4.2 Initial Project Schedule submitted within 40 days of NTP.	3.2 CQC plan furnished for review NLT 14 days after receipt of notice to proceed. 3.2.2 Acceptance of plan required before the start of construction.
6.3.1 Daily CQC reports to be prepared and submitted via QCS.	3.5.4 Schedule Reports - Specified reports to be submitted at least monthly.	3.9 Documentation – contractor shall maintain current records providing factual information of quality control activities.
6.3.2 Deficiency Tracking – numerically tracked and reported using QCS.		3.2.1. g Procedures for tracking construction deficiencies.
6.3.3 Three Phase Control Meetings – maintained, scheduled and reported in QCS.		3.6 Control – Preparatory, Initial and Follow-Up phase of control.

6.3.4 Accident/Safety Tracking – Comments, direction, guidance, deficiencies, accidents		3.6 g – A review of the appropriate activity hazard analysis to assure safety requirements are met. 3.6.2 e – Check safety to include compliance with and upgrading of the safety plan and activity hazard analysis.
6.3.5 Features of Work – include in the QCS database. Each pay activity must be linked to a feature of work.	3.3.2.10 – Feature of Work – All activities shall be identified by the feature of work in which the activity belongs.	3.2.1. I – A list of definable features of work. The list will be agreed upon during the coordination meeting.
6.3.6 QC Requirements – develop and maintain a listing of testing, transferred and installed property and user schooling.	3.3.2.3 – Government Activities shall be shown. (Approvals, inspections, tie in).	3.7.1 Testing Procedures
6.4 Submittal management – Using the government provided Eng Form 4288 contractor shall maintain a complete listing of submittals including schedule dates. Contractor shall use QCS to track and transmit submittals.	3.3.2.2 Procurement Activities – Task related to procurement of long lead items (> 90 days) to be included in the schedule.	3.2.1 d – Procedures for scheduling, reviewing and managing submittals.
7. Implementation – QCS shall be an integral part of the contractor's management of quality control.	1.2 Qualifications – Contractor shall designate an authorized representative responsible for schedule and reports.	3.1 General Requirements – Contractor is responsible for quality control and shall establish and maintain an effective system for compliance.
8. Data Submission – data to be submitted via E-Mail	3.4.4 Standard Activity Coding Dictionary – Contractor shall use the SDEF structure.	3.9 Documentation – Contractor shall maintain current records.
9. Monthly Coordination Meeting – Contractor shall update QCS each workday. Updates shall be submitted at least once per week.	3.4.2 Periodic Schedule of Updates – Submitted at the frequency of payment (monthly).	3.3 Coordination Meeting – before start of construction. There may be occasion for subsequent conference to reconfirm mutual understandings in the CQC

Quality Control System

Contractor shall meet with Government monthly to review planned progress reporting.		system.
Payment request will not be accepted without an acceptable QCS export file.		